V. 58
1912

The Journal of the
American Medical Association

Published under the Auspices of the Board of Trustees

VOLUME LVIII, No. 2 CHICAGO, ILLINOIS JANUARY 13, 1912

THE EDUCATION OF THE PHYSICIAN AND POSTGRADUATE STUDY IN THE HYGIENE AND DISEASES OF THE NURSING INFANT *

HENRY KOPLIK, M.D.
NEW YORK

The history of the study of the diseases of infancy and childhood in America is intertwined with the development of all branches of medicine into special studies. As in all countries, the undergraduate study and postgraduate training of the American physician in the diseases of infancy and childhood has at first been slow and gradual. At the present time, we can say that the pursuit of knowledge in the hygiene and diseases of infancy receives its full quota of attention and acknowledged importance in this country. It is only within the past thirty years that pediatrics has become a recognized department of study in our universities and colleges. There are good reasons for this, and one of the most important is that in other lands this study of children was also of tardy recognition. In this new country where every foreign influence receives its quick response, pediatrics was not recognized as a distinct department of internal medicine until the late seventies. At this time and before, the various medical schools and universities combined the study of diseases of children with that of obstetrics and diseases of women. Even in the dispensaries and clinics the two departments, that of the diseases of women and that of children's diseases, were combined. As late as in the eighties, I knew of a reorganized dispensary which combined the treatment of infants and children with that of women. As Osler says in a notable address before the American Pediatric Society: "The foundation of accurate knowledge in internal medicine has been the study of the problems of the pathologic laboratory." Thus, from the empirical clinical field we turn for a good reason—for the development of pediatrics in America—to the study of pathology. And it was certainly those whose knowledge of pathology was well grounded who first broke the road to the modern trend of the study of the diseases of infancy and childhood in America. Before the seventies, the universities and medical colleges had no independent chairs of pediatrics.

In 1876, the reorganized faculty of the College of Physicians and Surgeons in New York, an offshoot of Columbia University, recognized the importance of the intimate study of the diseases of infancy and childhood as a branch of special pathology. The incumbent of the chair of pediatrics at this time was A. Jacobi, and the reorganized faculty was under the leadership of Alonzo Clark, who was one of the first to bring to America the light of modern pathology as reflected from the French schools. Jacobi, in all his teachings, it may be observed, rather leaned to the German school of pathologic anatomy and was a student of the work of the immortal Virchow and an expounder of his doctrines. To this source I lay the first development of modern pediatrics in America. Before this time, the influence of the English and French schools was predominant and these were mostly clinical. With the development of pathology and pathologic anatomy in America, through the leadership of Delafield, a pupil of von Recklinghausen and Rindfleisch, Prudden and Welch, pupils of Virchow and Cohnheim, and with the special direction given to such studies by teachers such as Jacobi, we may date the development of pediatrics as a separate special pathology in America. The charm of the earlier teachings of Welch and Prudden led many young men abroad to seek the treasures, part of which were taught to them in the lectures of the teachers I have named. Germany and its many schools were the Mecca of these young men, and to-day the influence of the German school of pediatrics is predominant in America and has completely displaced the English and French influence as a leading factor. We have only to turn to the earlier text-books written by American authors on diseases of infancy and childhood, those of Meiggs, Pepper, Smith and Keating, and compare them with later works of Holt, Rotch and Koplik to confirm these views. If the pathology of infancy and childhood in gross was the first great branch which has been responsible for the advance of pediatrics in America, the study of the various infections were of next importance, and with the advent of bacteriology the diseases of infancy and childhood received another impetus from the teachings of the parent country.

With the development of bacteriology, the studies of Booker, Jackson, Prudden and others were directed along pediatric lines following closely the impetus received from Germany in the work of Koch, Loeffler, Gaffky, Baumgarten, Escherich and Heubner. The younger generation of physicians here, charmed with the teachings and work of the leaders at home, brought also their quota of study both at home and abroad. I need not point out here how productive a field for both pathologic and bacteriologic study the subject of the diseases of infancy and childhood has always been; and American workers have been quick to recognize the fact that in the child is reflected the fate of the adult. The study of prophylactic hygiene of infancy and childhood is of only recent date. I recollect the day when diphtheria, as it was also abroad, was treated in the open wards in full ignorance of the facts connected with

* A report and address read by invitation before the Third International Congress for Child Welfare, Berlin, Sept. 11-15, 1911.

its infectiousness and communicability. To-day we see in America the full recognition of the importance of the hygiene of the newly born and the first months of life. We fully recognize our debt to teachers such as Koch, Escherich, Runge and Epstein in shedding light on these problems. I think that to-day the feeling of uncertainty in the presence of infection of the newly born has to a great extent been relieved, and the importance of such infections is fully recognized.

As in every country, the active practicing physician is found to forget the main principles of his training, and we find in private practice much more serious lapses against the fundamental truths of hygiene and infection than in institutional work. The cause of this can be easily traced. To-day, even in the medical schools, sufficient stress is not laid on the study of the hygiene of infancy and childhood, the prophylactic side as compared to the clinical study.

The clinical study of diseases of infancy and childhood has made great strides in the last two decades in America; the charm of these practical clinical studies has eclipsed the no less important fields of hygiene and prophylaxis. Effort has been mostly expended on the idea of making the medical student a good diagnostician and very little time has been given to the study of how, by hygiene and prophylaxis, the physician may teach the mother to avoid disease. I may say, in my daily work I am more and more impressed by the indifference which some physicians show to the rights of mothers to know and to be taught the simplest truths for the safety of the children and themselves. Among the poor this is especially evident. Outside of the clinics the private physician seems to think that with a few directions as to the preparation of an artificial food, his duty is ended. The general welfare of the child, the simple teachings as to its care, the care of the mouth, the body, the eyes, the genitals, all are passed by, perhaps on account of the stress of other duties.

The physician does himself as well as his patient injustice by the indifference hinted above; the result is that the laity have been quick to respond to the impetus of specialism, even in pediatric work, much to the harm and chagrin of the general physician. The remedy is still with the physician, and I am certain that he will also be quick to respond to this demand for extraordinary work on his part. The general activity during the past two decades in America in the welfare of infants and children was put on a secure basis in 1896, in the establishment of the American Pediatric Society. The union of the leading minds working in the same field has resulted in the establishment of many smaller societies for the study of diseases of children, so that in most states of America, societies for the study of diseases of children have been organized. The benefit to the general practitioner and through him to the laity has been inestimable. The laity have also taken an extraordinary interest in the study and welfare of infants and children, in the organization of societies for the study of infant mortality and the reduction of this mortality. The culmination of these activities among the laity has been seen during the early part of this year, in the great exhibits of the child welfare activities held in New York and Chicago.

I have said that pathologic studies first held their own, relegating hygiene and prophylaxis to a minor rôle. It seems to me that there is a distinct reason, not yet mentioned, for this. In European countries the government takes an intimate interest in the new-born, its fate and prosperity as also of the growing infant. In America this interest is the care of private individuals, and for this reason the whole realm of child welfare and infant mortality has been of late cultivation, but, though late, it is none the less active and sincere and now in the full era of its development. One of the first activities in the direction of child welfare, hygiene and prophylaxis in our country has been the institution of milk stations, or the *gouttes de lait*. The importance of these institutions in large cities, especially in the United States where the cities are congested with the poor from all quarters of the globe, the hopelessness of treating and caring for infants in the old way by simply prescribing for the child and sending the mother on her way, was first made evident to me on my return from studies in Germany. In connection with the largest pediatric dispensary probably in America, in the summer of 1889,[1] I established the first *gouttes de lait* with consultations. In this I not only instructed the mothers in feeding the children, but also those mothers who had some breast-milk were encouraged by all means to nurse their infants in addition to giving artificial food. The infants were weighed and the mothers thus encouraged in the progress of their little ones. This so-called milk depot was the first in America. Modeled on its plans, later on the Strauss depots were established, but the latter lacked the consultation feature. To-day, not only does the original institution of the *gouttes de lait* exist, but its usefulness has been fully recognized and New York has probably more milk depots in existence, also with consultations, than any other city, not only in America, but Europe. In 1911, in that city and its environs, there were sixty or more such milk stations under private and municipal control.

Another development of child welfare has been the school inspection instituted by the board of health. This also is an emanation from the teachings of the American Pediatric Society. In 1890, Caillé first suggested that daily school inspection of children would tend to reduce the liability of infection, and the New York Board of Health in 1897, as also the Massachusetts Board of Health (1894), and that of Philadelphia (1898) quickly saw the utility of such work. To-day the daily inspection of school children is a well-developed department under the auspices of the boards of health in the various large cities of the country. This system of school inspection cannot be overestimated as to its importance. The children who show need of care and medical guidance are referred back to the family physician; there is an endless educational chain established; not only infectious diseases, but the hygiene of the nose and throat and the management of defective vision and hearing come under the supervision of the health authorities. So important has this department of board of health activity become that in New York a department of child hygiene and welfare has been established by the board of health. This department has at its command nurses and physicians whose duty it is to educate not only the laity, but incidentally the physicians.

The division on child hygiene of the New York Board of Health takes cognizance and has money appropriation to control the practice of midwives, to supervise foundlings, to supervise day nurseries and institutions for the care of dependent children, to care for babies and reduce infant mortality, to inspect school children medically, and to issue employment certificates. Nor are these empty activities; the work of the health board and

1. New York Med. Jour., Jan. 31, 1891.

especially this department has, though only recently organized, begun to attract wide attention. One of the most notable activities of the department of health is the supervision of the milk-supply and the establishment of some fifteen milk depots, *gouttes de lait*, where not only pure and good milk is furnished at a nominal price, but where mothers are instructed in the care of infants and the preparation of their food.

In 1910, some 250,000 pupils were examined in the public schools, an earnest of the enormous amount of work done and to be done in this melting-pot of 4,000,000 inhabitants. With this, there has been also free dental treatment following inspection, as also trachoma treatment. It would carry me away from my theme to go further into detail with regard to the work of what promises to be probably the most modern handling of the problems of child hygiene and prevention of mortality.

I will not enter into all the activities tending to child welfare which have sprung up of late years. I need only refer to the Russell Sage Foundation, which has been engaged in the study of child welfare and infant mortality in America, and in New York especially, and the far-reaching work of the Society for Improving the Condition of the Poor. In all this activity, where do we find the general practicing physician? I am in a position to know that the practitioner appreciates the helping hand which is given to him by these societies in his daily work among his patients: the district nursing and teaching, the furnishing of food for the infant, the education of the mother in the care of the infant. But in this uprising in the study of infant life, the hygiene of the new-born, the fate of the new-born, the fostering of the life of the infant, I see that if this development is to keep the pace that it has in the last ten years, it will grow beyond the control of the general practitioner. There will always, as Jacobi aptly says, "be an infant mortality"; no matter how perfect our system of prophylaxis and hygiene, there will always be the inexperienced mother and father to reckon with. There will always be the problems of environment and heredity, and there will always be the irreducible quota of infants who are born only to see the light of day and pass out. But the whole realm of infant and child welfare has of late years received such an impetus in America, and so much wealth and interest are being expended in the care of the infant and study of infant life that the inevitable result will be the building up of a new field of human interest. Just as formerly the general practitioner attended to the wants of the infant and child, and the accomplished practitioner with skill in discerning the needful as to sick infants was much in vogue, so now he has drawn to his aid and acknowledged the wider experience of the special pediatrist. On this side of the Atlantic we are just tending to the full development of an entirely different department of usefulness, that is, child welfare. It is the fault primarily of the general practitioner that the very side of his work which is the most important and interesting has been hitherto the most neglected by him.

I have taken at random 1,000 cases of infant-feeding from my private practice. Of these 1,000 cases, I find that an infant at the breast is taken away at times for the most trivial causes; the result is that the infant suffers, and I may say, also the mother.

Taking 1,007 cases of feeding, I have divided them for the sake of comparison into cases of infants exclusively fed from birth on the bottle, in which no attempt was made at breast-feeding, and those cases in which breast-feeding was attempted but abandoned during a certain period of infancy, and finally those in which from birth there was an effort at mixed feeding on the breast and bottle, presumably because the breast did not suffice.

Absolute bottle-feeding	286 cases
Breast- and bottle-feeding	721 cases
Total	1,007 cases

Of the 721 infants, 573 were carried along on the breast for periods of time as follows:

1 month or less	112
2 months or less	89
3 months or less	82
4 months or less	59
5 months or less	47
6 months or less	40
7 months or less	20
8 months more or less up to 1 year and then placed on the bottle	124
Total	573

A number to the extent of 148 cases of the 721 were started on the breast and bottle from birth because either the breast was insufficient or the mother could not or did not wish to nurse the baby entirely on the breast. Thus, of the whole number of 1,007 infants we can only really say that 124 were entirely breast-fed, 12 per cent., and of the whole number, 573, or 56 per cent., were breast- and bottle-fed babies for varying periods, while 28 per cent. were bottle-fed absolutely. Of the 573 infants which were fed on the breast and then on the bottle, 60 per cent. were put on the bottle at the fourth month and the breast abandoned, and in only 20 per cent. of the breast-fed children was an attempt made from the start at mixed feeding, the practitioner abandoning the breast in the remaining cases when the breast for one reason or another was insufficient.

These statistics give a much better insight into the nursing capabilities of mothers than any others I have seen because the infants were in the hands and under the advice of the family physician and were brought to me only when the physician or the mother saw that the infants were not thriving. These statistics also give an impartial picture of conditions as they exist in practice to-day.

SUMMARY OF 1,007 CASES

	Infants—No.	Infants—Per cent.
Breast-fed exclusively	124	12
Breast and bottle (various periods)	573	60
Breast and bottle from birth	148	14
Breast until fourth month	342	47
Exclusively bottle-fed from birth	286	28

To summarize further in 1,000 cases of feeding:

10 per cent. of the infants were exclusively breast-fed

30 per cent. of the infants were exclusively bottle-fed

The remainder were breast- and bottle-fed, and of these only 60 per cent. were kept on the breast until the fourth month, and then put on the bottle without any attempt to retain the breast.

If a physician makes only one analysis of mothers' milk and finds the fats low or high, he will in the earlier moments of lactation cease breast-feeding. Again, many mothers are dissuaded from nursing because they are nervous, others because there is not enough milk. Mixed feeding does not seem to occur to the physician of the baby. Another set of infants are

taken away because of colic. Physicians still find it convenient to grasp at the substitute infant foods. They are not given to the study of the symptoms of indigestion or the character of the stools. Whose fault is this? I must say that my impression is that the fault is as much with the teacher as the pupil. Thus I see the development of a distinct activity, the higher education of the physician in the hygiene and diseases of infancy and childhood. These, as far as the purely hygienic and prophylactic sides are concerned, are passing into the hands of the boards of health, the so-called municipal control. There is in the future growing up a distinct class of activities, those concerned with *gouttes de lait*, school inspection, home nursing visits and instruction, day nursery and kindergarten inspection, the summer management of infants and children, which will bring into existence and furnish study to a distinct set of physicians, because the physician whose work is in the sick-room cannot find time to be in the *gouttes de lait* or in the schools. It would be well for our universities to recognize these facts.

Dr. Welch, in a recent discussion before the American Association for the Study and Prevention of Infant Mortality, said that it was not the function of the university to turn out the student adequately trained in preventive medicine. I do not think this as desirable as the incorporation in the university studies of a sociologic side to the selective training of medical men. In other words, the sociologic side of medical work is fast becoming of such great importance that it will command attention as a distinct department of medicine, and in this we will see the training of a distinct class of physicians, or even laymen, who will, among many other things, devote their energies to infant and child welfare. The department of infant and child hygiene established by the New York Board of Health is an earnest of a beginning in this direction. At present, there is in the universities no definite teaching of child hygiene and welfare apart from the general chair of diseases of infancy. There is not even any such pretension. The whole development of this subject in America has been outside the colleges and universities and, as I have pointed out, much of the initiative has been taken by physicians and public-spirited laymen.

Is it desirable for the general practitioner, the worker among the sick, to turn aside and devote his time to a field in which from a sociologic standpoint he has not been trained? I think the time and the training are lacking, and just as the diagnosis and management of a pneumonia require skill and practice, so the details of social child welfare naturally fall to the lot of an entirely independent set of workers. Thus the state or municipality will naturally take up this field and will train, as it does now, and bring into existence a new set of physicians who will give their full time to problems which to-day are understood but not cultivated by the physician at large. At the same time, in a retroactive way the general practitioner will appreciate more and more the importance of certain lines of work in the hygiene, prophylaxis and care of the infant and child, and will in a measure be a co-worker of the physician who is working with the state in a sociologic as well as a medical capacity. Thus indirectly, both by law and precept, the state will eventually teach and enforce those primary principles of hygiene and child welfare which to-day are a matter of growing interest. For the present, the system pursued by the municipal board of health, especially in New York, has developed into a postgraduate school for the higher education of the physician in the most important and pressing aspects of hygiene, prophylaxis and diseases of infancy and childhood.

Entering under the aegis of its activities, the physician is thrown into daily intimate contact with the infant and child, especially in the crowded districts of the city. From there his work tends directly to the research laboratories of the health boards. We find that not only the hygiene, but diseases of infancy and childhood, including infectious diseases, come under his active care.

Thus I see this postgraduate and higher education of the physician fast becoming a separate calling, a cult, apart from the active practice of medicine. The laity are quick to recognize the great resource placed at their command and are now using it in connection with the services of their regular physicians. The New York Board of Health has established a serum treatment activity. In diphtheria, meningitis, rabies, tetanus, they stand ready to apply not only the remedy, but the means of diagnosis, such as lumbar puncture.

Will the universities take up this phase of the practice of medicine? Will there be created an elective course for younger men of hygiene and preventive medicine in correlation with diseases of infancy and childhood? It seems that this is not imaginative if we look at the daily activities of the health board among the infants and the children of the poor. The increase of the work, the need for more physicians, young and enthusiastic, highly trained in the lines I have indicated will, I think, eventually result in a remodeling of the course of studies in the universities, so that men may elect to follow as a lifework the study and treatment, the hygiene and prophylaxis of diseases of infancy and childhood under municipal control, and in the most advanced scientific paths. The rôle of the general physician will broaden, he will be called on to advise and counsel, to point out the indication for interference, for diagnosis and treatment. Thus his education and higher education must inevitably keep pace with, and enter the paths of, the highest attainable scientific activity for the general welfare of the community at large.

30 East Sixty-Second Street.

HEXAMETHYLENAMIN

REPORT OF A CASE OF MEDICINAL CYSTITIS FOLLOWING ITS ADMINISTRATION

WILLIAM D. FULLERTON, Ph.B., M.D.
CLEVELAND

Following the excellent work of Crow in 1908, hexamethylenamin has come into quite general use, as can be seen by a review of the recent literature. Its elimination, dosage, action, etc., have been studied, but little if anything has been written regarding its toxic effects, if they have been observed.

In 1899, Nicolaier[1] demonstrated that hexamethylenamin was excreted in the urine, and Sollman[2] showed that a considerable part, if not all the drug excreted by the kidneys, was excreted unchanged, and broke down liberating formaldehyd only after remaining in the bladder for at least one and a half hours. It has, therefore, been recommended in genito-urinary infections, and as a prophylactic when catheterization has to be resorted to for any length of time.

1. Nicolaier: Deutsch. Arch. f. klin. Med., 1899, xxxviii.
2. Sollman, T.: The Journal A. M. A., Sept. 5, 1908, p. 818.

Crow,[3] in 1908, showed that when hexamethylenamin was given by mouth it was rapidly absorbed and remained in the circulating blood for twenty-four hours. He found it in the bile, excreted by the liver and in even greater amounts by the gall-bladder itself. He demonstrated that if the dose were at least 75 gr. per day, it would prevent bacterial growth within these passages. He, therefore, recommended its use in acute infections and as a prophylactic before operation on these parts; during and after typhoid fever, and on bacillus-carriers as they may harbor the organisms for a long period of time in the gall-passages. Given after typhoid fever it undoubtedly has some effect in preventing the formation of gall-stones, for the presence of the infecting organisms in these passages during and after the disease is a well-known fact, and Cushing has produced gall-stones in animals by injecting their gall-bladders with typhoid or colon bacilli, and he states that catarrhal inflammation is necessary to the formation of stones. Welch has shown that other organisms, among them streptococci, may be the nuclei around which stones are formed, and, therefore, in infections of these parts with other organisms, hexamethylenamin would be a precautionary measure.

Crow has also demonstrated the elimination of the drug in the synovial fluid, pancreatic juice, milk of dogs, saliva, pleural fluid and cerebrospinal fluid, after administration by mouth, and, in 1909, published experiments[4] showing that it had at least an inhibiting action on the growth of organisms introduced into the meninges of animals.

The largest amount of hexamethylenamin is present in the cerebrospinal fluid half an hour to one hour after ingestion, and the growth of organisms was inhibited in spinal fluid obtained by puncture after the administration of the drug.

In view of these experimental facts, Crow recommends its use after traumatic injuries to the skull, preliminary to ventral and lumbar puncture and in all operative procedures within the skull; also in extracranial infections apt to extend to the brain cavities, as mastoid, middle-ear and sinus infections. It has been used in meningitis and, in several cases reported, with evident benefit. Lately it has also been recommended in poliomyelitis.

Further study by others shows it to be eliminated elsewhere, as within the middle ear,[5] by the bronchial mucous membrane[6] and sputum,[7] and Miller[8] and others recommend it as useful in treating coryza, acute rhinitis, pharyngitis and infectious inflammatory processes of the respiratory tract. Excretion takes place into the anterior chamber of the eye,[9] but in such a concentration as not to inhibit bacterial growth, at least in the test-tube.

Hanzlik[10] showed that it was unchanged when found in the saliva, but here, as no stagnation occurs (which is not the case with the other fluids), this is not surprising, and from the work of Sollman, mentioned above, it would seem most probable that the drug may be unchanged everywhere on excretion, only breaking down liberating formaldehyd, and thereby assuming its protective nature after more or less stagnation. The drug unchanged in solution is very slightly if at all antiseptic.

As stated above, though considerable has been written on the use of the drug, I find little mention of its toxicity and no cases cited as examples.

Frothingham[11] has shown that hexamethylenamin injected into guinea-pigs causes congestion and sometimes hemorrhages into the stomach, and he states that this suggests that the lesion is not organic, while the lesion in the case I report below certainly has the appearance of being organic. Wiggs[12] speaks of the irritant effects sometimes encountered experimentally and states that if even small doses are continued, irritation will be produced. Hematuria of a mild grade has been encountered after the use of the drug, but clears up rapidly on its discontinuance.

That lesions of a more serious nature may be noted following its administration is seen by the following case:

Patient.—A white woman, aged 25, married; with one child, 18 months old. Her past history is unimportant, though it may be stated that she was never a very robust individual, had had several attacks of tonsillitis and more or less difficulty in breathing through her left nostril. She had never had any renal, bladder or pelvic trouble.

Present History.—The patient was 8½ months pregnant and perfectly well, up to the time when first seen. Her urine had been absolutely normal in this as in her former pregnancy. Her trouble began with a severe facial neuralgia which subsided on extraction of a carious tooth. Two weeks later a similar neuralgia developed on the opposite side of her face and this proved to be due to an empyema of the antrum of Highmore. The antrum was opened and drained through the nose, removal of the lower turbinate being necessary to enter the sinus. The turbinates of both sides were hypertrophied and swollen, and the septum deviated to the left. Drainage was free, and the cavity was frequently irrigated with borie and saline.

Course.—One week later the patient began having headaches which began quite regularly at 9 a. m., increased in severity up to noon and eased off so that by evening the patient was comfortable. These headaches increased in severity from day to day, though once or twice were not so severe as the day preceding. They were localized, being always on the left, in the supra-orbital region, and extending around to the temporal region of the same side. Tapping or pressure in the supra-orbital region, and especially when made upward and toward the midline at the inner angle of the eye, would be quite painful. After a day or so there was some slight puffiness in this latter area. For the severe pain the patient was given morphin, as it was feared she might fall into labor.

Diagnosis and Operation.—Involvement of the frontal sinus was suspected, and preparatory to a possible operation the patient was started on hexamethylenamin, receiving 40 gr. a day for two days. The third day after starting the drug, under ether, the frontal sinus was opened on the left through the nose and considerable pus and necrotic bone removed. The ethmoid cells were found very necrotic and were thoroughly curetted; the naso-ocular septum was also neurotic, in places entirely gone.

Administration of Hexamethylenamin and Its Results.—The day of this operation the patient received 60 gr. of hexamethylenamin and 60 gr. the following day, in the evening of which the bladder symptoms began after taking 200 gr. over a period of four days. She voided every ten or fifteen minutes, had pain and burning, especially at the end of urination. The day following, the hexamethylenamin was ordered stopped and hexamethylenamin methylen-citrate (helmitol) in doses of 15 gr. three times a day given in its place, as it has been held by some that the latter drug has the same effects without

3. Crow, S. J.: Johns Hopkins Hosp. Bull., 1908, xix, 109.
4. Crow, S. J.: Johns Hopkins Hosp. Bull., 1909, xx, 102.
5. Bartin, W. M.: THE JOURNAL A. M. A., March 12, 1910, p. 871.
6. Heitmuller, G. H.: THE JOURNAL A. M. A., April 9, 1910, p. 1222.
7. Armstrong and Goodman: THE JOURNAL A. M. A., May 27, 1911, p. 1553.
8. Miller, A.: THE JOURNAL A. M. A., June 10, 1911, p. 1718.
9. Gradle, H. S.: Ophthal. Rec., March, 1911, p. 110.
10. Hanzlik, P. J.: THE JOURNAL A. M. A., June 11, 1910, p. 1940.
11. Frothingham: Arch. Int. Med., November, 1909, iv, 510.
12. Wiggs, L. D.: South. Med. Jour., Nashville, December, 1910.

the occasional slight irritation of the former. Unfortunately, however, through a mistake, the patient received 45 gr. more of the drug during the day, and in the evening, twenty-four hours after her first symptoms, which had increased in severity during the day, she had marked hematuria, passing many small blood-clots as well as pieces of bladder membrane several centimeters square. The urine was acid, contained many pus cells and a considerable amount of albumin. The hexamethylenamin was stopped immediately, alkaline water was pushed to keep the excreted drug dilute and eliminate it as soon as possible, in order to reduce the irritation of the bladder by an acid urine and also because the drug breaks down most readily in an acid medium. Potassium citrate and tincture of hyoscyamus were given as a vesical sedative and all condiments and other irritative articles of diet stopped. For three nights and two days after the onset of the hematuria, the patient continued to pass blood-clots and bladder-membrane. Red blood-cells were present for ten days, the pus cells and albumin gradually diminished, though they disappeared entirely only after three weeks. The cystitis was thought at first to be due to some infective agent and it was conjectured that possibly the kidney or its pelvis was involved. If so, the pressure of the pregnant uterus on the ureters would prevent free drainage and serious consequences follow. Shortly after the onset of the cystitis symptoms, the patient was catheterized. No organisms were found either in centrifugalized specimens or in cultures made from the latter. Had the cystitis been an infective one of such severity, it would not have subsided so quickly, even with the hexamethylenamin, and organisms would have been found, at least in smears from the urine, at the height of the trouble. The urine being sterile, the symptoms arising shortly after the drug was begun and clearing up at once, though gradually, after it was discontinued, and there being no other possible etiologic factor, all this seems to be conclusive evidence that the trouble was purely a medicinal cystitis.

A word as to the dosage of the drug which, indeed, depends on the condition for which it is used. As a genito-urinary antiseptic, or prophylactic against infection and in infections of the respiratory passages, from 10 to 15 gr. three times a day is deemed to be sufficient. When its effects are desired in the biliary passages, at least 75 gr. per diem should be given. When the cerebrospinal cavities are to be protected, the dose may be as much as 200 or 250 gr. a day, though a dose of 100 or 150 gr. is no doubt as efficient and irritative effects much less apt to be met with. Here the object of the larger doses is to saturate the cerebrospinal fluid thoroughly and to keep it saturated during the period of greatest danger of infection.

The small doses may be continued for a considerable period of time without ill effects, but the larger doses are to be used only for short periods of a day or so.

Hexamethylenamin in itself has some diuretic action, but water should be liberally given, as it allows a freer excretion and lessens the dangers of irritation.

I wish to thank Drs. Thomas C. Worthington and Thomas R. Brown, both of Baltimore. Dr. Worthington did the nasal operations and Dr. Brown offered many valuable suggestions.

Lakeside Hospital.

Social Cooperation in Disease Prevention.—In the diagnosis and treatment of disease, etiology plays an important part, but the great triumph of etiologic medicine lies in the possibilities for preventive and social medicine which it has opened up. In preventive medicine the state through education, legislation, inspection and regulation plays an essential part. Preventive medicine can be made effective only where the state employs highly trained men to look after sanitation and hygiene. Nearly all diseases at bottom are social and can be properly repressed only by social cooperation.—C. R. Bardeen in *Science*

CESAREAN SECTION: INDICATIONS AND TECHNIC: REPORT OF TWENTY-NINE CASES *

T. MITCHELL BURNS, M.D.

Professor of Obstetrics, University of Colorado; Attending Obstetrician Mercy and County Hospitals; Consulting Obstetrician St. Anthony's Hospital, National Jewish Hospital for Consumptives and Florence Crittenton Home

DENVER

INTRODUCTION

The conservative Cesarean section with the technic here described is the easiest and best Cesarean operation, and the one which should give the least maternal and fetal mortality and morbidity. These deductions are based on thirty-two cases without maternal mortality from the operation, other cases observed, and on the general literature of the subject.[1]

INDICATIONS

Cesarean section is indicated:

First, when there is non-engagement of the head due to obstruction.

Second, when there is non-engagement of the head and a condition necessitating rapid extraction, which cannot be safely performed by the vaginal route.

The usual obstructions are:

1. Contracted pelvis.
2. Rigid cervix and excessive uterine retraction.
3. Tumor.
4. Large head, abnormal presentation or posterior position which cannot be corrected.
5. Atresia.

Contracted Pelvis.—Cesarean section is indicated when the conjugata vera is 3¼ inches (8 cm.) or less, and should be done as soon as the cervix is dilated two finger-breadths; or when the conjugata vera is more than 3¼ inches in a primipara, provided the head does not engage after the test of labor.

Symphyseotomy is preferable when the true conjugate is more than 3¼ inches in a multipara.

Craniotomy is indicated when the true conjugate is 3 inches (7.5 cm.) or more if the fetus is dead.

Obstructing tumors are usually fibroids of the lower uterine segment, ovarian tumors impacted in the cul-de-sac, bony tumors of the pelvic wall and carcinoma of the cervix.

Fibroid tumors often flatten and slip out of the way spontaneously. If this does not occur, an effort should be made to displace them manually or by the knee-chest position. If they cannot be so displaced, they should be removed with or without doing a Cesarean section.

In carcinoma, sarcoma and certain fibroma, the Porro-Cesarean section, i. e., Cesarean section with partial or complete hysterectomy, should be performed.

The usual conditions which necessitate rapid extraction by Cesarean section are non-engagement of the head with:

1. Eclampsia.
2. Placenta prævia with rigid cervix.
3. Ablatio placentæ with active hemorrhage.
4. Beginning exhaustion or collapse of patient.
5. Death of the mother.

* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911. Between the time this paper was read and the receipt of the proof the author tried a modification of the technic used in those cases in which the uterus was not delivered until after the extraction of the child. The article has been modified to include the new preferred technic and the report of ten additional cases.

1. The author's first three cases were reported in the Colorado Medical Journal, November, 1902.

Eclampsia.—Cesarean section is indicated in eclampsia with non-engagement of the head, after medical treatment fails, in a primipara, or in a multipara with rigid cervix or a history of previous difficult labor. Medical treatment is considered to have failed in eclampsia if it does not stop the convulsions, lessen the coma and improve the pulse within an hour or two.

Abdominal section is preferable to vaginal in eclampsia in a primipara with rigid cervix, even if the head is engaged. It requires less time and is more favorable to the child.

Infected Cases.—So-called infected cases (i. e., those which have been long in labor, have been repeatedly examined, and even had the forceps applied) do as well after the conservative Cesarean section as after high forceps, and better than after the extraperitoneal or the Porro operation.

Porro-Cesarean Section.—Cesarean section, with partial or complete hysterectomy, is only indicated in cases complicated by carcinoma, sarcoma or certain fibroma.

TECHNIC

Preparation.—A soapsuds enema should be given and the abdomen and vulva shaved, rendered aseptic and dressed. (The soapsuds enema prevents subsequent gas pains.) One arm in the region of the basilic vein should be rendered aseptic and dressed so that an intravenous injection may be given.

When the patient is in a private house and Cesarean section becomes indicated, the ambulance or taxicab should be ordered and the patient prepared as much as possible for the operation. A soapsuds enema should be given if one has not been given within the last few hours. The lower abdomen and vulva should be shaved or closely clipped, thoroughly scrubbed with soap and water, covered with wet bichlorid towels and plenty of absorbent cotton, and secured by an abdominal and a vulvar "T" bandage. The patient may be kept in the first stage of anesthesia in the ambulance, if necessary to lessen suffering, to prevent excessive retraction of the uterus, to prevent eclamptic convulsions and to have the patient ready for operation when she reaches the hospital. If an ambulance or taxicab is inaccessible the patient may be taken to the hospital in a wagon on a mattress, or if she is in good condition, on the train, even if it requires several hours' ride.

If the operation must be performed in a private house, plenty of sterile gauze and sterile towels should be in readiness, but if they cannot be obtained at once, clean towels and sheets may be sterilized in a wash-boiler and the water drained. Wash-basins and pitchers may be sterilized in another wash-boiler or sterilized before the sheets and towels. Tin, galvanized or enameled basins and pitchers may be sterilized by boiling water in them. They should be filled with water, covered with another basin or a cloth and the water allowed to boil fifteen minutes.

In an absolute emergency towels and basins may be disinfected by phenol (carbolic acid) and alcohol or by hot strong bichlorid solution, and then twice rinsed in a hot normal salt solution. An operating table may be improvised by using the kitchen table and a stand or an ironing-board.

Instruments necessary for the abdominal section, the clamping and cutting of the cord, and intravenous injection should be sterilized. A dish-pan or foot-tub of warm water, a pitcher of cold water and an aspiration tube should be at hand to use in resuscitating the baby. A hypodermic of ergot should be ready.

INSTRUMENTS

For making the abdominal and uterine incisions, a scalpel and a pair of blunt-pointed scissors, curved sidewise, i. e., Krey's, 6½ inches.

For holding the ends of the uterine and abdominal incisions, two pairs of Moore's tenaculum forceps, 6½ inches.

For passing iodoform gauze through the cervix, one large sponge forceps.

For suturing the uterus, one dozen large, full-curved, round, taper-point needles, Ferguson's No. 1, each threaded with one-fourth of a No. 3 chromic catgut suture.

For suturing the abdominal layers, except the skin, three similar needles threaded with a No. 1 plain catgut.

For skin sutures, eight full-curved cutting-edge needles, No. 1, threaded with medium-weight silkworm gut.

For holding the ends of sutures and grasping bleeding vessels, a dozen hemostatic forceps.

For cutting sutures, a small pair of scissors.

For clamping and cutting the umbilical cord, Pulling's funis-clamp and a pair of Krey's 5½-inch blunt-pointed scissors, curved sidewise.

For aspirating mucus from the throat of the child, a piece of rubber tubing about the size of a lead-pencil and a glass connecting-point with a groove near its large end. (This groove allows the teeth of the one resuscitating the baby to get a good bite on the connecting-point.)

For intravenous transfusion, the usual instruments.

For anesthesia, ether, as chloroform seems to be the main cause of fetal asphyxia in Cesarean sections.

TIME OF OPERATION

The best time to operate is after the cervix has dilated two finger-breadths, as this insures good drainage during the lying-in period. When this amount of dilatation is not present, it should be produced by manual dilatation per vaginam before the Cesarean section, but in an emergency it may be effected by passing the fingers into the cervix from above. There should be less danger of contaminating the peritoneum by dilating the cervix through the vagina than through the uterine incision.

THE OPERATION

The entire abdomen should be prepared and surrounded by sterile sheets and towels. (A large horseshoe pad should be placed on the abdomen, or towels folded lengthwise and wrung from hot normal salt solution should be placed on the sides and upper and lower parts of the abdomen.)

The Technic When the Uterus is Delivered Before it is Incised

The abdominal incision should be made through the left rectus muscle near the median line, but enough to the left to miss the umbilicus. The incision should be about 8 inches long and about one-third of its length above the navel. (It should be started with a knife, below the navel and opposite a projecting part of the uterus, to avoid cutting the intestines, which may lie in front of the fundus, but not in front of the body of the uterus, and it should be done gently to avoid cutting the uterus. The incision should be enlarged with Krey's scissors.)

One hand should be passed into the incision and behind one horn of the fundus and this pulled forward, then the other hand on the abdomen should push the

other horn forward, thus bending the fundus through a small incision, without loss of time.

As soon as the uterus is delivered, the large protecting pad or the folded towels should be placed against the uterus and especially behind the fundus, to prevent any blood passing into the abdomen.

An assistant should grasp the lower part of the broad ligaments near the uterus to check the bleeding and to hold the uterus steady, but care should be used not to grasp it so tightly as to interfere with the extraction of the head. At this time the anesthetist should give the hypodermic of ergot.

A 5-inch incision in the anterior wall of the body of the uterus should be rapidly made with a knife. Care should be used not to cut the baby and it is well to remember that the uterine wall may be very thin. If the placenta is in the way, it should be rapidly incised or pushed to one side.

The fetus should be grasped by the buttocks and extracted. When the lower segment is tightly retracted on the head, the operator should pass one hand into the uterus along the occiput to the vertex and deliver the head by flexion.

As soon as the child is delivered, the upper assistant, grasping the broad ligaments, should release his hold and grasp the upper end of the uterine incision with tenaculum forceps and make traction to control the bleeding, to steady the uterus, and later to coapt the edges of the incision, and thus aid the uterine suturing. (This traction of the uterus usually controls the bleeding so that it is rarely necessary to have an assistant grasp the broad ligaments or the lower segment of the uterus and be in the way of the operator.)

The child should be handed to an assistant and the placenta immediately delivered. The placenta should be detached by grasping with the hand its fetal surface and twisting. The membranes should be loosened by gentle traction. (The uterus should be carefully inspected for particles of the placenta and membranes and the lower segment especially examined for adherent membranes.)

While the placenta is being delivered, the assistant holding the baby should perform artificial respiration by flexion and extension of the chest on the abdomen and have the baby's mouth wiped with dry gauze.

After the placenta is delivered, two one-yard strips of 3-inch iodoform gauze, washed in hot normal salt solution and knotted together should be grasped in a sponge holder, the knot passed through the cervix into the vagina and the rest packed in the uterus.

The uterine incision should be closed with interrupted sutures, run an inch wide and an inch apart and deep enough to go nearly to the endometrium. Wide stitches like these usually stop all bleeding, but if they do not, one or two mattress stitches should be introduced.

Just before the last one or two sutures are inserted, the uterus should be firmly squeezed with a hot towel, to expel blood and aid retraction. The uterus should then be wiped clean, any blood mopped from the abdominal cavity and the omentum placed behind the uterus. The abdominal incision should then be sutured in tiers.

The peritoneum should be very carefully stitched so as to coapt its edges and to keep the sutures out of the peritoneal cavity.

The muscle should be loosely sutured and then four retention sutures of silkworm gut should be passed through the skin and fascia and held with hemostatic forceps. Next the fascia should be sutured with a continuous catgut, and lastly the skin sutured with silkworm gut.

Variations.—The abdominal incision may be made entirely with the knife. The ovum may be delivered whole when the placenta is in the line of the incision, or if the membranes are firm.

The upper part of the abdominal incision may be temporarily closed with tenaculum forceps. The operator may resuscitate the baby while an assistant removes the placenta and membranes.

When the recti muscles are wide apart, they and their fascia should be dissected sufficiently to bring the muscles together and to make the edges of the fascia overlap. In this case the fascia should be fastened together by mattress stitches.

The Technic When the Uterus is not Delivered Until After the Child is Extracted

The assistant opposite the operator and facing toward the patient's feet should grasp the sides of the fundus, and then in order to prevent the escape of amniotic fluid and blood into the peritoneal cavity, he should push the uterus forward against the abdominal wall at the same time making traction on the skin. The pressure should be continued after the extraction of the child, to deliver the uterus.

The operator should make a 5½-inch incision in the *right rectus muscle* just below the navel. He should make the uterine incision about 5 inches long, and then with the aid of pressure exerted by the assistant, extract the child, the uterus and after-birth in rapid succession. The child should be delivered by grasping its head.

As soon as the uterus is delivered, the upper assistant should grasp the upper end of the uterine incision with tenaculum forceps. The rest of the operation should be done as previously described.

DISCUSSION OF THE PRECEDING TECHNIC

The better technic for the average operator is that in which the uterus is delivered before it is incised.

The technic of choice for all skilled operators is that in which the uterus is not delivered until after the child is extracted and while it is the operation for elective cases, i. e., clean cases, it probably can be used in so-called infected cases with as good results, provided special care is used to keep the fluids out of the abdominal cavity.

Making the short incision through the right rectus muscle allows the uterus to be incised in its median line without rotating it, a procedure which is not always easy for the inexperienced. This incision is the ideal one for cases complicated by appendicitis, as after the Cesarean section the appendix can be easily reached through this incision and removed.

Grasping the fetal head instead of the breech aids extraction and seems to lessen the fetal asphyxia.

Rapidly cutting through the abdominal wall may injure an intestine or the bladder, and often slightly cuts the uterus to one side of the median line. The use of Krey's 6½-inch scissors, curved sideways, lessens the danger, in rapidly making the abdominal and uterine incisions.

The use of the large protecting pad or the folded towels lessens the amount of blood which may enter the peritoneal cavity, but the pad is better than the towels.

The making of the incision in the rectus muscle allows the stitching to be made in layers and thus lessens the dangers of hernia.

Making one-third of the incision above the navel allows the extraction of the uterus through a smaller incision and lessens the chances of injuring the bladder.

Too tightly grasping the broad ligaments near the uterus may interfere with the extraction of the head.

The ergot should not be given before the abdominal incision is begun, as giving it at an earlier period seems to cause an excessive retraction of the uterus.

Care must be used in cutting through the uterus, which varies in thickness from 1/4 to 1/16 of an inch, as otherwise the child is often slightly cut.

When the placenta is in the line of incision, rapidly incising it does less harm to the child than taking time to separate the placenta.

At times it is impossible to extract the fetus rapidly without grasping its head or pushing upward from below.

Grasping the upper end of the uterine incision with tenaculum forceps, and making some traction steadies the uterus, coapts the edges of the incision and aids retraction of the uterus and uterine blood-vessels.

Through lack of careful inspection (or palpation) of the interior of the lower uterine segment, adherent membranes are often overlooked.

Loosely packing the uterus and cervix, with iodoform gauze, lessens the possibility of hemorrhage, aids retraction, does not cause the blood to escape into the peritoneal cavity and does not interfere with the normal uterine drainage, if it is not left in more than twelve to twenty-four hours.

A single row of interrupted stitches of heavy chromic catgut (No. 3) placed an inch apart and an inch wide, usually stops all bleeding, and usually, perfectly coapts the incision.

Mattress stitches stop the bleeding in bad cases better than the usual stitch, but they do not coapt the edges of the peritoneum quite as nicely.

Application of a hot, wet towel causes the uterus to markedly retract and thus, together with sufficient pressure to expel the uterine clots, lessens subsequent bleeding and after-pains.

The resuscitation of the child should begin as soon as it is born, for the sooner the mucus is removed from the child's throat and nose and artificial respiration begun, the less the fetal mortality.

The use of one row of uncovered stitches in the uterus and the placing of the omentum behind the uterus results in a ventral suspension, makes the uterus and most of the abdominal incision practically an extra-peritoneal wound and usually causes the patient to get up as after a normal labor and without any bearing-down sensations.

Carefully stitching the peritoneum lessens the tendency of omental adhesions above the uterus and prevents the possibility of a ventral fixation.

REPORT OF TWENTY-NINE CASES

In all these cases non-engagement of the head and the special indications mentioned were present.

The sections were all performed at Mercy Hospital, Denver (except one case performed at the County Hospital), and for the uniform good results which were obtained, much credit should be given to the interns and nurses of that institution.

Special mention should be made of the following physicians who have repeatedly assisted me: Dr. J. C. Hutchison, Dr. George L. Munson, Dr. Agnes Ditson, Dr. Charles A. Ferris, Dr. Ida Beers, and the anesthetist, Dr. C. G. Parsons, who administered the anesthetic, directed the giving of the ergot and did the intravenous work.

The duration of the operation from the beginning of the incision to the tying of the last suture and including removal of tumors or tying of uterine tubes, varied from fifteen and one-half to thirty-eight minutes.

The after-care in reference to asepsis, bowels, diet, getting up, etc., was practically that usually employed at Mercy Hospital for obstetric cases. (See *Denver Medical Times*, March, 1911.)

Report of Eighteen Cases With Removal of Uterus Before Extraction of Child

The anesthetic used in these cases was chloroform.

The maternal mortality from the operation was *nil*. The patient with tuberculous meningitis died half an hour after the Cesarean section.

Maternal morbidity was present in 70 per cent., i. e., twelve out of the seventeen that lived had a temperature over 100.5 sometime after the first twenty-four hours. This was due to a stitch abscess in three of the cases.

All the patients with morbidity slept and felt well, except for after-pains or gas-pains the first three or four days.

The infant mortality from the Cesarean section was 22 per cent. (i. e., four out of eighteen infants died during labor or a few hours afterward). One premature child also died on the sixth day from no discernible cause.

There was no infant morbidity, although in most of the cases, the child was asphyxiated when extracted.

CASE 1.—Mrs. W., primipara (patient of Dr. Ray). Dermoid cyst incarcerated in cul-de-sac.

June 27, 1906, Cesarean section, Drs. Burns and S. T. Brown.

Normal recovery. Temperature over 100 for three days, then 99 + to twelfth day. Pulse 99 to 100 to eleventh day. Child, male, well.

CASE 2.—Mrs. D., primigravida near term (patient of Dr. Skillman). Placenta prævia, rigid cervix, repeated hemorrhages before and after vaginal tamponade.

Oct. 5, 1906. Vagina carefully packed and then Cesarean section performed.

Normal recovery. Temperature 100 sixth day, pulse 130 on the first, third and sixth day. Child, female, weighed 6½ pounds and seemed well until its death on the sixth day.

CASE 3.—Mrs. S., multigravida near term (patient of Dr. Hamill). Ablatio placentæ, rigid cervix, repeated hemorrhages before and after packing; cervical canal long and only dilated one finger-breadth.

Sept. 11, 1907, Cesarean section.

Good recovery but slight morbidity. Temperature 100 second and third days, pulse 128 just after operation, 104 second day. Patient very weak and faint from considerable bleeding after hypodermic injection codein ½ grain for after-pains, but rapid improvement after strychnin, salt solution per rectum and vaginal tamponade. Patient says she got along as well as after her previous labors. She soon showed definite signs of syphilis and we concluded that the decidual endometritis must have been due to syphilis. Two or three years after the Cesarean section her uterus was removed by Dr. I. B. Perkins, who found the line of the uterine incision just as thick and firm as the rest of the uterine wall. Child was a premature male, presenting by the breech. It died four hours after birth.

CASE 4.—Mrs. M., primipara (patient of Dr. Alice T. Moore). Flat pelvis, brow presentation, head not engaged; prolonged labor, forceps ineffective.

May 9, 1908, Cesarean section. Considerable difficulty in extracting the head from retracted lower uterine segment.

Good recovery but slight morbidity, and hernia along incision below navel developed after patient was up and working hard.

At subsequent operation inner edge of recti muscles found half way to lines running vertically up from anterior spines of ilia. The recti muscles were brought together, the fascia overlapped and an excellent result obtained.

Temperature 100.8 third day, then packing removed and temperature went down. Pulse before operation 82, after, 140; 150 third day; 100 to 130 until the tenth day, when it was 90. Child, male, well.

Case 5.—Mrs. W., primipara (patient of Dr. Agnes Ditson). Contracted pelvis.

April 13, 1909, Cesarean section. As the uterine incision reached 3 inches, a uterine contraction occurred and caused the incision to rupture into the right horn of the fundus. The patient received, before the operation was begun, 1 dram of ergot by mouth and 1/30 grain of strychnin by hypodermic injection to overcome the supposed relaxing effects of a hypodermic injection of ¼ grain of morphin given one and one-half hours before. This is the probable cause of the rupture.

Good recovery occurred but there was slight morbidity. Temperature 100.6 once, 104 once, emesis and pain the first three days. Child, female, well.

Case 6.—Mrs. B., primipara (patient of Dr. Agnes Ditson). Right hip-joint ankylosed; right knee in front of left thigh, pelvis otherwise normal.

Jan. 7, 1910, Cesarean section.

Good recovery, but infection from stitch abscesses. Temperature 101 the first ten days; 99 + the next eight days. Two stitch abscesses found on the tenth day and some pus present until twenty-first day.

Child, male, well.

Case 7.—Mrs. L., primigravida. Eclampsia; first convulsion after 40 grains of chloral per rectum and hypodermic injection of gr. ¼ morphin; four convulsions fifteen minutes apart; internal os rigid.

Jan. 28, 1910, Cesarean section.

Good recovery, but slight infection from stitch abscess. Temperature 102.4 on seventh day, due to one stitch abscess; temperature 101 several times; pulse 90 to 100.

During the first week marked drowsiness, some restlessness, no appetite and very poor vision were present, but these gradually disappeared as did the albumin in the urine.

Child, male, well.

Case 8.—Mrs. S., primipara (patient of Dr. Ida Beers). Flat pelvis. Right occipitoposterior position; head not engaged, cervix dilated, forceps failed in hands of three operators; fetal heart-beat seemed good at residence; patient in labor forty hours, in second stage six hours; pulse 150; skin mottled from failure of circulation.

Feb. 23, 1910, Cesarean section and an intravenous injection of 500 c.c. of physiologic salt solution. Some morbidity but, except for backache and weakness, patient felt well and ultimately made a good recovery. A hot lemonade sweat on the eighth day apparently caused the temperature to drop from 103.6 to 102 on the ninth day. Temperature 100 + to 101.6 first six days, 102 on seventh day, 103.6 on eighth day, 102.8 on ninth day, 102 on tenth day, 101.2 on eleventh day, 99 + twelfth to thirteenth days. Pulse after operation, 140; 110 to 120 up to fourteenth day, 90 fifteenth day.

Child, male, still-born, weighed 10 pounds.

Case 9.—Mrs. E., primipara (patient of Dr. Ida Beers). Flat pelvis, labor forty-eight hours.

Feb. 28, 1910, Cesarean section.

Slow recovery. Some infection from stitch abscess; pus discharge for weeks and patient not well. Temperature 99 to 100 first week, 102.6 eighth day, 103.4 ninth day, 103 tenth day, 99 eleventh to thirteenth day, normal fourteenth day. Pulse 120 first three days, 90 to 100 to end of first week, 112 eighth day, 120 ninth and tenth day, 100 eleventh day, normal from twelfth on.

Hot lemonade sweat eighth day, stitches removed ninth day and stitch abscess found. Home on fourteenth day without permission.

Child, male, well.

Case 10.—Mrs. F., multipara, previous labor, high forceps, still-birth and severe lacerations followed by considerable morbidity. Contracted pelvis, left mentoposterior position corrected to right occipito-anterior, labor test of two hours after conversion and cervix fully dilated; no progress except occiput rotated backward until "deep transverse arrest" of head was produced.

March 11, 1910, Cesarean section.

Good recovery, but slight morbidity. Temperature 99.6 second day, 101 third day, 102 fourth day, 101.5 fifth and sixth day, 99 + until twelfth day. Pulse 100 to 110 first six days, 99 + seventh and eighth days, then normal.

Child, male, well.

Case 11.—Mrs. W., primigravida, eighth month. Tuberculous meningitis and moribund. (Tonic spasms of arms, stertorous breathing, dilated pupils, cold sweat, coma twelve hours); fetal heart sounds good.

March 21, 1910, Cesarean section to save child; usual technic except fetus delivered without rupture of membranes. Child cried as soon as membranes ruptured. Mother given 500 c.c. of physiologic salt solution intravenously. Pulse slow before and after operation. Convulsions and death half an hour after operation. Could not obtain post-mortem, but patient had had pulmonary tuberculosis for over a year.

Child, male, well.

Case 12.—Mrs. H., primipara. Fibroid in anterior wall of lower uterine segment, preventing passage of child into lower uterine segment after test of labor.

April 28, 1910, Cesarean section and removal of fibroid.

Normal recovery. Temperature 100 first day. Pulse 100 first day, and chill second day. Child, female, 5 pounds, asphyxiated, resuscitated but atelectasis and death in twelve hours.

Case 13.—Mrs. F., multipara (patient of Dr. Mugrage). Ventral fixation; no engagement of head after test of labor, and cervix only three finger-breadths. ("Mouth of womb opened at seventh month by rusty instruments.")

May 3, 1910, Cesarean section and ligation of uterine tubes.

Good recovery, but slight morbidity. Temperature 99 first day, 100 + second and third days, 101 to 102 fourth day, 99 ninth day, then normal. Pulse 100 first three days, then 120 to ninth day, 90 to 100 to twelfth day, then normal.

Child, male, well, 4½ pounds.

Case 14.—Mrs. S., primipara, dermoid cyst of right ovary impacted in cul-de-sac.

May, 1910, Cesarean section and removal of dermoid.

Good recovery, but slight morbidity second day. Temperature 98.4 first day, 100.6 second day, 99.2 third to sixth day, after then normal. Pulse 80 first day, 80 to 90 after. Child, female, well.

Case 15.—Mrs. R., primipara (patient of Dr. Gray). Excessive uterine retraction, slight pelvic contraction. Left occipitoposterior position; in labor thirty-six hours, cervix dilated manually but traction with forceps caused cervix to retract on blades.

Aug. 15, 1910, Cesarean section. After section cervix repaired.

Normal recovery. Temperature 99.5 third day, normal after third day. Pulse 116 second day. Child well.

Case 16.—Mrs. B., multipara (patient of Dr. Ditson). Excessive retraction before rupture of membranes, head in left iliac fossa, one elbow and one foot near internal os; in labor fifty-two hours; prolapse of cord after rupture of membranes.

Aug. 15, 1910, Cesarean section.

Normal recovery. Temperature 99.2 third day. Pulse 94 first day. Child, male, well.

In these two cases it will be noted that the operation occurred on the same day.

Case 17.—Mrs. D., primipara (patient of Dr. Agnes Ditson). Excessive uterine retraction, head projected over rim; in labor twenty-three hours; well-marked caput succedaneum, membranes unruptured, retraction not lessened by two hypodermic injections of morphin, ¼ grain.

Aug. 21, 1910, Cesarean section.

Good recovery, but slight morbidity. Temperature 100 to 101 first twelve days, then normal. Pulse 110 first two days, 100 to the twelfth day, then normal. Child, female, 6½ pounds, well.

Case 18.—Mrs. L., colored, primipara (patient of Dr. Spratlin). Contracted pelvis, head floating, cervix dilated, Walcher's position and forceps of no avail.

Aug. 27, 1910, Cesarean section and removal of two small fibroids.

Good recovery, but slight morbidity. Temperature 101.6 on eleventh day and from normal to 101 + until twenty-second day, after-pains and gas-pains first three days, then normal. Pulse 110 on eleventh day, 80 to 100 rest of time. Child gasped several times and died. Much mucus, not removed.

Report of Eleven Cases Without Removal of the Uterus Until After the Extraction of the Child

Two of these operations were performed by Dr. J. C. Hutchison and one each by Drs. Hugh Taylor and G. L. Monson, but as consultant, and because the technic here described was followed, I obtained permission to report them.

Chloroform was the anesthetic for the first four cases, ether for the last seven. The fetal asphyxia was much less in the ether cases.

The maternal mortality in these cases was *nil*. Maternal morbidity (temperature over 100.5) was present in 45 per cent., i. e., in five of the eleven mothers, but all got up well. The morbidity was due to stitch abscess in three of the cases, to appendicitis in one and no apparent cause in one. [We are unable, at present, to explain the frequency of stitch abscesses in Cesarean section.]

All the patients with morbidity except Nos. 19, 22 and 27 slept and felt well unless disturbed by gas-pains or after-pains.

The infant mortality from the Cesarean section was 18 per cent. (i. e., two out of the eleven died from asphyxia, but both were only seven month fetuses).

In the first four of these cases the abdominal incision was made through the left rectus muscle, in the last seven it was made through the right rectus.

CASE 19.—Mrs. A., primipara, aged 19, 9 months pregnant (patient of Dr. Shollenberger).

Eclampsia, seven convulsions; head not engaged; internal os dilated one finger; two hypodermic injections of morphin gr. ¼.

May 22, 1911, Cesarean section.

After operation, six convulsions. Chloral gr. 30 and bromid gr. 30 of no value. Chloroform off and on for one hour, twice of some value. Hypodermic of morphin gr. ¼ of more value. Bleeding, 8 oz., and 500 c.c. of normal salt solution intravenously of great value. After the bleeding and salt solution, patient quiet for the first time and no more convulsions. Patient unconscious for three days.

Highest temperature 100.2, sixth day; stitch abscess in arm.

Child, male, 6 pounds, well.

CASE 20.—Mrs. C., primipara, aged 19, nine months pregnant (patient of Dr. Ida Beers).

Eclampsia, three convulsions; head not engaged; internal os dilated one finger. Milk diet, drugs, sweats, etc., for three days before convulsions and temperature 99.4 for three days preceding convulsions. Morphin, gr. ¼, after first convulsion.

May 29, 1911, Cesarean section. Patient bled 8 ounces and given 500 c.c. of normal salt solution during operation.

Patient conscious one-half hour after the operation. No more convulsions. Good recovery, but temperature 102+ for three days. Stitch abscess in arm and abdomen.

Child, male, 8¼ pounds, well.

CASE 21.—Mrs. S., primipara, aged 19, nine months pregnant (patient of Dr. Collyer).

Eclampsia; three convulsions, head not engaged; internal os effaced, external os two fingers. Two hypodermic injections of morphin gr. ¼, also chloroform.

June 1, 1911, Cesarean section. Patient bled 8 ounces and given 500 c.c. of normal salt solution during operation. Patient conscious four hours after operation. Fine recovery, highest temperature 100, third day.

Child, male, 8¼ pounds, well.

These three eclamptic patients were blonds, under 20 years of age, primiparæ, and all the children were males and born within ten days.

CASE 22.—Mrs. H., primipara, in labor thirty hours. Cervix only four fingers, no progress last six hours, manual dilatation of no avail, head not engaged, forceps applied tentatively, but no descent; excessive uterine retraction, even under anesthetic.

June 14, 1911, Cesarean section; extraction of head possible only after getting hand below it and then delivery caused a loud report due to the excessive retraction of lower segment around head.

Good recovery, pulse 130 to 150 after operation and above 100 until after the seventh day. Temperature, 101 on fifth day and several times 100.6. Slight phlebitis of right leg and stitch abscess.

Abdominal incision only 2½ inches a month after operation.

Child, female, easily resuscitated and well since.

CASE 23.—Mrs. W., primipara, seven months pregnant (patient of Dr. Hugh Taylor).

Appendicitis for several days. Temperature 101 to 103.5 for three days. Internal os effaced and external os one finger for over two days.

July 12, 1911, at 2 a. m., Cesarean section. Operation performed by Dr. Hugh Taylor, assisted by myself. Abdominal incision made through right rectus muscle; after Cesarean section uterus pressed to the left, walled off with gauze and then appendix removed.

Good recovery. Temperature 102.4 to 103.8 and pulse about 110 first three days. Temperature 101 tenth day because of stitch abscess. Pulse below 90 after fourth day.

Child, 7 months or less, could not be resuscitated.

CASE 24.—Mrs. C. (patient of Dr. H. C. Brown), secundipara but first was an 8-month child and weighed only 4½ pounds. Pelvic deformity at left sacro-iliac joint. In labor twenty-four hours; complete dilatation of cervix, but head not engaged, forceps tentatively used, of no value.

July 20, 1911, Cesarean section. Incision in right rectus; pulled head out first, uterine incision so low that it nicked the bladder at its upper attachment to the uterus.

Pulse 68 after operation.

Fine recovery; highest temperature 100 first day; highest pulse 88.

Child, male, 7½ pounds, easily resuscitated, well since.

CASE 25.—Mrs. S. (patient of Dr. J. C. Hutchison), primipara, breech presentation, twenty-two hours of hard labor, cervix only two fingers after manual dilatation from one finger, excessive retraction beginning.

Sept. 3, 1911 (2:20 a. m.), Cesarean section. Operation performed by Dr. Hutchison assisted by Drs. Monson and Burns.

Fine recovery; highest temperature 100.4 first day, normal most of time; highest pulse 88.

Child, male, 8½ pounds, easily resuscitated and well since.

CASE 26.—Mrs. G. (patient of Dr. G. L. Monson), tertipara; previous labors instrumental and children still-born. In labor seventy-two hours.

Aug. 6, 1911 (12:30 p. m.), Cesarean section performed by Dr. Monson assisted by myself and others.

Good recovery. Highest temperature 100.2 first day; highest pulse 170 first day, 134 second and 100 third.

Child, female, 8 pounds, easily resuscitated and well since.

CASE 27.—Mrs. S. (patient of Dr. Hutchison), tertipara. Two previous labors, breech presentations and delivery of head very difficult; children still-born. Cancer of left breast; gonococci in vaginal discharge; acute dilatation of heart one week before labor. In labor thirty-six hours, breech presentation right sacroposterior, cervix dilated two fingers. Pulse 120.

July 30, 1911, Cesarean section performed at County Hospital by Dr. J. C. Hutchison, assisted by Drs. Monson and Burns. Patient had pneumonia and stitch abscess but ultimate recovery good. Highest temperature 104, sixth day; highest pulse 136 sixth day, respiration 36 to 40 first twelve days Patient well since fourteenth day.

Child, female, easily resuscitated and well since.

Case 28.—Mrs. B. (patient of Dr. J. T. Elliott), primipara, polyhydramnios, over seven months pregnant, shoulder presentation, excessive uterine retraction without contractions until hand introduced into cervix, could not pass hand into uterus under anesthesia, fetal heart-beat good.

Sept. 21, 1911, Cesarean section. Fine recovery; highest temperature 100.2 fourth day, most of time normal. Pulse 100 first three days.

Child, male, could not be resuscitated.

Case 29.—Mrs. C. (patient of Dr. Rice), secundipara, First labor breech at eight months, child died in three hours. Right ovary and left tube removed and uterus suspended subsequently. Present labor: third position of shoulder presentation, cervix nearly dilated, cord, arm and shoulder in vagina, excessive uterine retraction. Oct. 10, 1911 (6:06 p.m.), Cesarean section. Good recovery; highest temperature 102.2 fourth day and 101.2 sixth day. Pulse 118 fourth day.

Child, male, 5¼ pounds, easily resuscitated and well since.

640 Metropolitan Building.

ABSTRACT OF DISCUSSION

Dr. John Osborn Polak, Brooklyn: The question of Cesarean section has come into great prominence of late because of the work of Reynolds and others who have shown that there is a large class of cases that are better handled by Cesarean section than by "high forceps operations and versions," as Dr. Burns has mentioned. There is one point in considering the indications for Cesarean section which must be taken into account. That is, we do Cesarean section in the interest of the child. I take exception to Dr. Burns' statement when he referred to the operation ablatio placentæ. There the mortality of the child is extremely great and the chances from Cesarean section after the placenta has been delivered are relatively small. In central placentæ, which is the only one which does not give the sign of hemorrhage, with rigid cervix, I have seen two cases that in my opinion justified Cesarean section. Both patients were primipara; both were central placenta prævia. In the one I did the old-fashioned bipolar version and lost the child; in the second, Cesarean section, with a very easy delivery and both mother and child recovered. In the treatment of ablatio placentæ I cannot conceive of Cesarean section having any place, because of the very high fetal mortality attendant on it. In eclampsia Cesarean section is a debatable question. Personally, I have seen enough eclamptics to believe Cesarean section is not indicated. The chances of the child are poor in the presence of toxemia while those of the mother are very small because of toxemia. My own experience covers 67 Cesarean sections with no maternal mortality and one fetal death. The technic is a counterpart of that of Dr. Burns. Where it can be done the uterus is not eventrated. By pressing the uterus well up against the abdominal incision the Cesarean section can be made and the child eventrated through the small incision. With the protection of the edges of the wound there is no soiling of the peritoneal cavity. I do not hold the broad ligaments because the hemorrhage almost immediately ceases. Neither do I put a tenaculum in the upper end of the wound; I put the first suture in the upper angle and hold that. One other point is the importance of light anesthesia, combining oxygen with the anesthetic and never beginning the anesthesia until the patient is on the table and the final preparation is being made. I have never had to resuscitate a single baby. When the patient was anesthetized in the reception room every baby had to be resuscitated.

Dr. T. Mitchell Burns, Denver: I have nothing to say different from what has already been said with reference to indications. I only refer to ablatio placentæ as being an indication for Cesarean section in exceptional cases and so of placenta prævia. In reference to the mortality of mother and child in eclampsia, I believe that if Cesarean section is performed early enough, as many babies would be saved in eclampsia as in other instances in which Cesarean section is performed.

THE TRAINING-CAMP METHOD IN THE TREATMENT OF THE FUNCTIONAL NEUROSES *

THOMAS J. ORBISON, M.D.
LOS ANGELES

The training-camp method is an evolutionary result of clinical experience. The best results in the rational treatment of the functional neuroses are obtained by the application of some form of work at a selected stage of the treatment.

Various forms of work have been tried, ranging from brass beating and pottery to gardening and farming. It is unnecessary to review the arguments in favor of work as a rational therapeutic agent in these cases; the question is, what is the best form of work. In the first place, all these patients do best under a regime which is free from personal responsibility. The best method known by which endurance, stamina, powers of resistance and physical well-being are obtained (under ordinary circumstances) is that which is imposed on professional athletes and especially on pugilists and wrestlers in training for their respective contests.

Some years ago I began to apply these methods, in a modified and suitable form, to various types of the functional neuroses and psychoses, and tried to evolve from the findings a rational system or method which would be sufficiently concrete to be useful and sufficiently pliable to be widely applicable. It must be suitable for women as well as men, and it must be so adaptable that it will admit of the exhibition of any other desired form of therapy. To be of actual value, it must be a method which will specifically increase the tone and resistance of the higher psychic and lower nerve-centers as well as the tone of the muscular system. It must be applicable to correct the asthenic circulatory conditions with low blood-pressure with which we meet in so many neurasthenics and psychasthenics. It must be a distinct addition as a psychotherapeutic measure in the treatment of the phobias, feelings of inadequacy, hypersensitiveness and subjective asthenia of the psychasthenics. It should enable the physician to apply reeducation and intensive psychotherapy to the curable dementia præcox cases and aid us in substituting the normal judgments and emotions for their abnormal ones and renew the psychic stereognosis. In hysteria it should help to overcome the dissociations and renew the normal associations. In short, it should specifically aid in bringing about the normal interrelation between the mental and physical by inducing in each its normal tone.

In a series of thirty cases of various types of the functional neuroses treated along certain definite lines and covering a period of more than ten years, the results have been so uniformly good that I desire to make a preliminary report on the method which shall, for convenience, be called the training-camp method.

Of the thirty patients fifteen were males and fifteen females. The disease forms represented are neurasthenia, psychasthenia, hysteria, dementia præcox, psychasthenia with melancholia and recurrent melancholia (see synopsis).

As to the seven cases of dementia præcox, three were diagnosed by the late Dr. Wharton Sinkler of Philadelphia, being referred to me by him, one patient has been under the care of Dr. Weir Mitchell, the other two had, likewise, been under the care of eastern neurologists.

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

V. 191

(I emphasize the preceding because the diagnosis of dementia præcox is liable to be misused and its confirmation is therefore the more satisfactory.)

In a later communication other cases will be reported at length. The present paper will be devoted to typical cases of neurasthenia and psychasthenia.

CASE 1.—*History.*—The patient was an unmarried woman, aged 27. The case was diagnosed as neurasthenia. No neuropathic taint was discovered in any of the immediate family or near relatives. The patient had never been robust. Six years before the present illness she had had a similar one (at that time she was under the care of a nurse for six months). She never fully recovered her normal health and had been semi-invalid since. During July her condition became very grave because of the inability to retain food (at times she could not retain even small quantities of water). She was referred to me in August, 1909, when she had been ill for five months.

Present Illness.—Her symptoms were those of progressive fatigue and progressive emaciation. The emaciation had become alarming and her fatigue so pronounced that she could not turn over in bed, brush her own teeth or hold her arm fully extended. A very unpleasant symptom was an excessive, generalized tenderness most pronounced along the spine (like that described classically by Weir Mitchell). The intestinal canal was atonic; micturition scanty.

Physical Examination.—The emaciation was extreme. Height 5 feet 7 inches; weight was judged to be between 50 and 60 pounds (by lifting her). The skin was of a muddy color and there seemed to be little or no subcutaneous fat; this was most marked over the thorax. The hands and feet were claw-like; the abdomen was concave and board-like. There was a peculiar musty odor prevalent about the patient. The tongue was coated and the mouth dry; the skin was very sensitive and the spine tender. All the reflexes were exaggerated. The voice was weak and low-pitched. The mentality was clear and there were no phobias. At times the patient wept because of weakness and a feeling of discomfort but no true hysterical symptoms were elicited. The heart sounds were weak and their rate rapid on any exertion but no organic lesion was noted. The lungs were clear but the respiration was very shallow. Vomiting and gastralgia were distressing symptoms; constipation obstinate.

Treatment and Course.—Inasmuch as this patient had of necessity been confined absolutely to bed and a rigid rest treatment, it was imperative to continue this with some rearrangement. In order to have her ingest the proper amount of food various psychotherapeutic measures had to be invoked, and within two weeks she was taking (for her) enormous amounts of food. The spinal tenderness was overcome by firm, steady, deeply directed pressure by the balls of the thumbs and fingers exerted on both sides of the spine at the same time and making traction in opposite directions as though attempting to rub out a wrinkle in the skin. I found that this sort of massage could be tolerated when no other could be, and the result was relief of the nervousness as well as the spinal tenderness. In the early weeks I relied on specific written directions to nurse and patient, which imposed absolute rest of mind and body and were accompanied by persuasion and encouragement. Forced feeding and massage could then be given at regular intervals. Graduated doses of the fluidextract of cascara were given three times daily for the intestinal atony. A specially directed combination of ferrous carbonate and arsenic was administered three times a day and increased gradually. Progress began early and continued favorably (with one change of nurses). In six weeks the patient sat up for ten minutes; in another week she could take a few steps and was weighed for the first time. The scales registered 76 pounds. After that she gained 1 pound a week steadily for a number of weeks (when dismissed she weighed 102 pounds and has increased it since then). Her muscular condition was improved by resisting exercises, while in bed, so as to prepare her for future work. After she was able to be out of bed the exercises were increased until she was fully prepared for the hard work that was to end her course of treatment. Up to this time she had gone through the rigid rest treatment, the modified rest treatment and the beginning combined rest-and-work treatment.

Her day was mapped out anew and she was placed on the training-camp routine. In her case this began with a series of stiff setting-up exercises at 7 a. m., followed by a cold salt rub. Then came a generous breakfast in bed. At 9:30 a. m. she and her trainer went out for road work for an hour; this consisted of brisk walking and some running. When she came in she was given a thorough, hardening rub-down and after it rested one hour in bed. At this time she was given two raw eggs in a glass of orange-juice—well beaten and shaken up with cracked ice.

After lunch the patient could read or sew until 2:30 p. m., when she put on her gymnasium suit and was led through an hour of hard work, beginning with skipping exercises, then crawling about on the floor, then medicine ball and last of all quoits. Then came a shower bath and another vigorous rub-down. This was followed by a rest period. When necessary, she was given a sweat bath to freshen the skin.

These constituted the main features of this stage of her treatment and lasted just about eight weeks, though she kept it up in a modified form for some time after. The result of her treatment was a gain of over 25 pounds in weight; she could walk several miles at a stretch. She began and has continued to live a normal, busy life.

I have reported this case at length because it was one of the severest types of neurasthenia and because it demonstrates the efficacy of the training-camp method to round out the preliminary treatment of such cases. (I have found it almost a specific in the cases of neurasthenia in which I have tried it.)

This case bears ample testimony to the imperative necessity of the so-called rest cure as a preliminary stage in a selected class of cases of neurasthenia and the almost startling benefits that follow it. But it goes a step further, most of these neurasthenics have probably never been in such excellent physical and mental condition as they are at the close of the training-camp stage of their treatment. The same holds true to a great extent in the cases of psychasthenia and hysteria in which I have imposed it. In these cases I consider that the benefits of the training-camp method are due in large measure to the almost military discipline, the regularity of the routine and the opportunities for applying lasting psychotherapeutic measures (as, for example, persuasion and reeducation, the substitution of a sense of adequacy for that of inadequacy, the overcoming distressing phobias, the counter-acting an excessive scrupulosity — in short, the correcting of psychasthenic dominants).

As an example of the training-camp method applied to psychasthenia I would cite the following obstinate case:

CASE 2.—*History.*—The patient was a married man, a banker, aged 36. His father was subject to fits of depression; he died at 74 of endocarditis following rheumatic fever. A paternal aunt committed suicide. The patient has three healthy children. As a boy and man he has had obsessions of fear. It is probable that they began with a story that was told him by one of the servants one night when he was a little boy. After this he was possessed by fear so that he got out of bed and sat on the stairs. He could recall vividly his sensations and said he sat rigid and staring into the darkness for hours before he was found and put to bed. He said he had had a number of phobias all his life but that he had until now been quite well able to control them. For instance, he could never stand beside a body of water without a desire to jump into it; going to a height caused an overpowering impulse in him to jump down from it. But these had now been augmented by the fear of being in a crowded house—unless he could have a seat near an exit—the fear of going across a

bridge, the fear that he would be unable to pay for the things he buys(as shoes and other wearing apparel).

Present Illness.—His condition was one of intense psychasthenia with its attendant feeling of inadequacy, lack of the power of concentration, self-reproach, inability to continue a business life, and the fears above mentioned. This aggravated condition was the result of the panic of 1907. Toward its end he became possessed by unnecessary fears for the ability of his bank to retain its integrity. He had lost 30 pounds in weight and had no appetite; his sleep was unsatisfactory and restless. At times he forgot what he had said or done a short time before; for instance, before coming under my care he visited my training-camp with a friend and seemed much interested in it but forgot that he had been there and what he did there. His expression was depressed and anxious. Symptoms of gastro-intestinal atony were abundant. His muscular condition was flabby; tendon reflexes exaggerated; indicanuria marked. His mental symptoms were hypochrondriac and melancholic.

Treatment and Course.—He was sent at once to a training-camp in the foot hills as he did not need a preliminary rest treatment. He received three months' rigid training. During this period the internal administration of such nerve tonics as valerian, hyoscyamus, camphor and asafetida, with cascara for the intestine atony, was deemed advisable. At the end of that time he returned home and later resumed an active business life. The latest reports from him were very satisfactory.

In this case the method was applied as follows: The site of this training-camp was a cottage in the foot hills near Pasadena. Here the patient and his trainer lived practically an outdoor life. The trainer was a professional trainer of pugilists and athletic teams. The food was simple, nutritious and well cooked. There was an open space at the rear of the cottage where boxing, wrestling, and medicine ball could be had regularly every afternoon. At 9:30 in the mornings his trainer took him out for an hour of road work. The work was easy at first and gradually increased. After both work periods he was given a hardening rub-down (after a shower) and then was put to bed for a rest period of an hour. His whole day was arranged for him and all that was expected of him was to obey instructions.

The motto of every training camp is "obedience." Every necessary psychotherapeutic measure is tried according to the case; seldom has it been necessary to attempt any of the extraordinary methods of psychoanalysis in the training-camp cases (in one of my cases it had been tried by a physician with disastrous results and in two others by an exponent of the Emmanuel movement with no effect, owing to faulty diagnosis).

CONCLUSIONS

I have found this method to be a specific in the true neurasthenias — combined with the other forms of rational therapeutics. Final results have been more gratifying in the cases in which it has been enforced than was believed possible, especially was this true of the cases of dementia præcox.

Additional experience has led me to try it in a variety of functional disorders characterized by atonicity either psychic or physical—e. g., in convalescence from the various infections and migraine.

My experience includes thirty cases in all. Nine patients were suffering from neurasthenia; four of these were men between the ages of 27 and 43, and five, women between 23 and 48. In this series the treatment resulted in eight cures and one cure with recurrence. In a series of ten patients suffering with psychasthenia, of which six were women between the ages of 35 and 52 and four men (one with dipsomania) between 36 and 50, six were permanently cured; two had a recurrence and two patients were improved. In a third group of dementia præcox, consisting of one woman, aged 25, and six men between 22 and 35, five patients were permanently cured; in two the outcome is as yet unknown. Two women of the hysterical type, both aged 25, were cured. Two patients, one a woman aged 23, suffering from psychasthenia with melancholia, and the other, aged 69, with recurrent melancholia, were cured.

Theoretically the method seemed capable of scientific application. Practical results of such application not only warrant its further use, but lead me to look on it as a powerful therapeutic aid that should give as good, if not better, results in the hands of others, if used with intelligent enthusiasm.

401 Auditorium Building.

ABSTRACT OF DISCUSSION

DR. C. R. WOODSON, St. Joseph, Mo.: I think Dr. Orbison in his detail of cases has merged neurasthenia, simple melancholia and pronounced melancholia. In plain English, neurasthenia is a tired nervous system, occurs oftener in persons who have loaded beyond their carrying capacity, and if that be true, the treatment that should necessarily follow would be rest. I am a strong believer in individualizing, and for that reason lay down no general prescription for the treatment of any disease. The individual who has the power of suggestion, or who can entertain, either as a physician or nurse, is fortunate. The individual who suffers from melancholia lacks initiative. He is apprehensive; he is suspicious; he realizes that his mind is affected; but still he has no delusions; the only manifestations that he has along these lines are along the lines that I have spoken of. This individual can be diverted by the diplomatic nurse or by the physician who can entertain. The one who imagines a certain thing, when he knows it is not so, or the one who fears that he may do a certain thing, and cannot go near a body of water or cannot do this and that, is suffering from a phobia. To produce sleep without medicines, to increase body weight, to insist on long hours of sleep, are the essentials in treatment of neurasthenia and melancholia.

DR. C. L. CASE, Oakland, Cal.: While I was in San Diego County in general practice I had a patient for whom I did not know what to do. He got so he did not take any interest in anything. I said to his father, "Get the boy interested in something; if you can't get him to do anything else, play cards with him." The boy played cards so long that he did get interested in that, and from that became interested in other things and got well.

DR. THOMAS J. ORBISON, Los Angeles, Cal.: I hold that if a patient is free from his symptoms for a year or more he may be considered cured. There is none among these cases that may not recur, for the same causes will induce a recurrence; but all the patients whom I have put down here as cured have remained cured. When there has been a recurrence, I have marked them "cured, with a recurrence," or "unimproved" and so on. So the patients are not simply cured for a little while and then lost track of.

As to the diagnosis, I divide certain of them into neurasthenics and psychasthenics. We all know the difference. The psychasthenic may be perfectly strong physically and yet be possessed by phobias, and has many mental symptoms that look much like melancholia. I found that almost all of my psychasthenics had hereditary taints, whereas in a good many of the neurasthenics I could not find a straight hereditary influence. It is most difficult to get these people free from their phobias, and in some of them I have been unable to do so entirely. They seem to be free, and in many cases I know that they are free from a number of them. For instance, one man, who was afraid to pass a certain building, was cured of his phobia. Another man was afraid to cross a bridge in his automobile. I have seen him with his face in his hand in abject fear. He recovered; so did many others. He has not rid himself of the fear of being in a high place. I don't believe that is a psychasthenic symptom entirely, as many of us have known many normal people who cannot go into a high place unless they have something to hang to.

V. 191

As regards the treatment of the women, I have found it necessary to educate the trainer first, because you will find it difficult to get competent women trainers for your patients; but here and there you can pick up one who will carry out your instructions. I find that when a woman will do that work, she will do it as well as a man. You make your point clear to the woman that you are going to have as your trainer, and then lay down rules in writing to be carried out.

CHLOROFORM FATALITIES: A REPORT OF CASES

P. W. MONROE, M.D.
Surgeon to the American Hospital
CITY OF MEXICO

The prevalent use of chloroform as the anesthetic of choice in many districts of the United States and its use throughout this country almost to the exclusion of ether, and this in spite of the increasing evidence and more or less general knowledge of its grave dangers, induces me to report the following cases.

I hesitate to report them only because I am unable to give pathologic data concerning them. The clinical courses, however, of Cases 1, 2 and 3 are so typically those recently attributed to chloroform as the causative agent in producing acute degenerative changes in the liver and an acid intoxication, that I think little doubt can be entertained of the diagnosis. The fact that such changes have been induced experimentally in animals by chloroform, and that clinically nothing else seems to explain the condition so aptly, has led, I think, to the general acceptance of the belief that this train of symptoms is the sequela of an anesthetic in those peculiarly susceptible, and that it is very much more frequent after chloroform than after ether.

Notwithstanding the comparative rarity of these cases, those which are herein reported have all come within my experience or knowledge as having occurred in this city during the past fifteen months. Of the sudden deaths occurring during the administration, one of them was that of my own patient and the others of patients of my colleagues. None of them has been reported.

I am entitled to a word of explanation that I should have continued to run the risk of chloroform even after experience of the first case. I have, as a matter of fact, since then used ether almost altogether, but on some occasions the anesthetist available has had no experience with the administration of ether and there has been no choice in the matter. In Cases 3 and 4, my anesthetist was a nurse, inexperienced in the administration of ether, but of ample experience as anesthetist in a hospital in the United States where chloroform is, or was a few years ago, used in routine.

CASE 1.—Mrs. H., aged 24, a native, a nullipara, of the better class, well nourished, and with a history of previous good health, was operated on for appendicitis, Wednesday morning, May 11, 1910.

The attack had begun several days before but the earlier symptoms had abated, the trouble had become localized, but with a distinctly palpable mass and a persistent and increasing afternoon fever. The operation was done in the patient's home but under favorable conditions. The general condition of the patient was excellent, and the urine normal. A distended and unruptured appendix, showing on the surface small areas of beginning gangrene, was removed. The surrounding tissues, cecum, mesentery and omentum showed considerable edematous infiltration; there was no pus, and the pelvis was clear; the wound was closed without drainage.

The amount of chloroform used was about 100 gm. The patient stood the operation well. On the following morning there was little pain or distention; there was returning appetite, and urine had been voided twice since the operation; the temperature did not go above 100 or the pulse above 90. During the night, however, the patient was not quite so well; there was some mental depression and uneasiness. On Friday morning, the abdominal condition was unaltered; there was no pain nor vomiting and but slight distention; no indications whatsoever of a peritoneal infection; the temperature about normal and the pulse-rate less than 100. The hunger was gone, however; there was slight jaundice which deepened rapidly during the day; the uneasiness gave place to a marked restlessness and later active delirium, with periods of stupor; there was nausea but no vomiting until evening, when greenish matter containing brown shreds and later the black coffee-ground vomitus appeared. The pupils became widely dilated. Calomel had been begun early in the morning and later various enemata and croton oil, but all without result. If any urine was passed during the day, it was very scant and lost in the bed; there was no edema of the skin, which remained dry in spite of hot packs.

The patient grew steadily worse, the pulse more rapid and feeble; the temperature remained slightly above normal. Deepening coma preceded death which occurred at 5 a. m. Saturday morning, sixty-eight hours after the operation and about thirty-six hours after the first indefinite symptoms had been noted.

CASE 2.—Mrs. L., an English woman, aged 26, in good health, pregnant for the first time and in the third month of pregnancy, was curetted by her physician for an incomplete abortion. The operation was done on Tuesday morning; no packing was put in the uterus. As the hemorrhage continued, chloroform was again given on Wednesday morning and the uterus packed with some strips of iodoform gauze.

I first saw the patient on Friday, about seventy-two hours after the first operation. The history was given that the previous day the patient had passed no urine and that about 2 ounces had been drawn by catheter, very dark in color, containing albumin and red blood-cells; no urine had been passed since then and but a few drops were obtainable by catheter. On Thursday she had become very restless, and during the night somewhat irrational; had vomited repeatedly a greenish fluid containing dark brown shreds; morphin had been given two or three times to quiet her.

The patient was at this time very restless, throwing herself about the bed, talking irrationally and complaining of thirst; her pulse was 110, of increased tension, and the temperature was normal. The skin was dry and distinctly jaundiced, though at no time did the jaundice become so marked as in Cases 1 and 3; there was no edema at this time. There was no dilatation of the pupil nor was this noted at any time; the patient had had, however, and continued to have, frequent doses of morphin. There was violent retching and frequent vomiting of small quantities of material as described above. Abdominal examination revealed nothing abnormal.

A diagnosis of chloroform poisoning was made, though the possibility of the symptoms being due to iodoform was kept in mind. The packing was removed and a douche given. Enemata had not been effective, so 4 drops of croton oil were given and as the vomiting was so incessant, this was repeated at intervals until the bowels moved. In the evening the patient had several dark, fluid and offensive stools.

An attempt was made to give alkalies by the mouth and by the rectum. Hot packs were given but the skin remained dry. The odor of acetone was noted on the breath.

On Saturday morning she was very much worse; entirely irrational, delirious and stupid in turn; the pulse was smaller and weaker, 120 to 140, the temperature about normal. There was slight edema noted over the tibiæ. No urine had been secreted. The patient was very hoarse, almost aphonic, and there was subcutaneous emphysema of the face and neck, supposedly due to a rupture in the upper respiratory passages caused by the violent struggles or vomiting. Salt solution was given intravenously.

The patient died in coma at 3:30 p. m., 101 hours after her first anesthetic and about fifty-four hours after the first unfavorable symptoms were noted.

CASE 3.—Mrs. T., aged 29, a native, primipara, of the middle class, well nourished, and with a history of good health previous to her pregnancy, was operated on Saturday morning, Aug. 5, 1911, for a ruptured ectopic pregnancy in the third month.

The abdomen was distended and, to the level of the umbilicus, filled with clotted blood. Many intrapelvic adhesions made the isolation and removal of the tube a matter of some difficulty and the woman was under chloroform for about two hours. The abdomen was irrigated with salt solution, left filled with the same and the wound closed without drainage. Salt solution was instilled by rectum following the operation.

The condition during the following twenty-four hours was good; no vomiting; pulse 104 to 114; temperature 99.6 F. On Sunday, however, the patient vomited a few times, greenish fluid containing dark brown particles; the pulse was 114 to 126; the temperature 99 to 100.6; otherwise there were no unfavorable symptoms.

During the third day, Monday, the vomiting, though not severe, was repeated several times; the pulse-rate was slower and the temperature not above 99.6; the bowels moved slightly following an injection of salt solution; urine was being passed in sufficient quantities; there was nothing to indicate intra-abdominal infection. In the evening, the patient was depressed and uneasy; said she was "going to die."

On Tuesday morning the temperature was normal and the pulse slower; there was slight jaundice; the uneasiness was succeeded, during the day, by extreme restlessness, so that constant watchfulness was necessary to prevent the patient getting out of bed; she became entirely irrational; there was some retching though not excessive; vomiting had ceased; the patient would take very little by mouth; thirst did not seem intense; the pupils became very widely dilated, and the jaundice deepened rapidly in hue.

The urine continued to be passed in fair quantities and contained bile and albumin; unfortunately no examination was made for acetone bodies. Calomel had been given early in the morning without result, also enemata. In the evening 4 drops of croton oil were given through a catheter passed through the nose, as the patient was refusing everything by mouth. This proved effective, several loose, dark stools resulting. Urine was being passed involuntarily. The temperature was normal; the pulse 100 to 110.

During Wednesday, the fifth day after operation, the condition continued about the same, periods of stupor alternating with the delirium; the jaundice became quite deep; the dilated pupils persisted; urine and stools were involuntary; there was no vomiting and the patient took a fair amount of water; some bile-stained serum escaped from the lower end of the wound.

On Thursday, after a quieter night, the patient was rational; the pupils smaller and active; vomiting, which had not occurred since Tuesday, was again provoked by food and water.

On Friday the patient was very much better, hungry and in good spirits, complaining only of some rectal tenesmus, which subsided on the insertion of an opium suppository; there was no more vomiting; the jaundice was less marked.

From this time the recovery of the patient was uneventful, and she was discharged August 20 with only a slight jaundice persisting.

It is quite difficult in any of these cases to fix exactly the time of onset of the unfavorable symptoms; in all of them it seems that the first symptom manifested was a mental depression and uneasiness. In Case 1 this was noted about thirty-two hours after operation; in Case 2, in less than forty-eight hours after the first operation; and in Case 3, disregarding the vomiting which occurred on the second day, not until fifty-eight hours after operation. Jaundice was noted early in all of them. It is to be noted, too, that in Case 3, which went on to recovery though the mental disturbance was quite as severe and the jaundice even more marked, the patient continued to secrete urine in fair quantities, while in Cases 1 and 2 anuria occurred shortly after the onset of the symptoms.

It is recognized that pregnant women are the most liable to these degenerative changes. Patients 1 and 2 were both near the close of the third month of pregnancy.

CASE 4.—Manuel C., Mexican laborer, aged 24, of robust physique, was sent to the hospital, October 22, 1910, for a beginning cellulitis of the foot, resulting from a puncturing wound. On the afternoon of same day chloroform was given that incision might be made and the wound cleaned.

During the scrubbing of the foot and before anesthesia was complete, the patient stopped breathing, but the respirations were promptly resumed and the condition was apparently normal; the anesthetic was continued. Before the incision was completed, the anesthetist advised me that the respirations had again ceased. This time no efforts at resuscitation were of avail. Inversion of the patient, artificial respiration with oxygen administration, did not cause even a spasmodic effort toward their reestablishment. The respiratory failure distinctly preceded cessation of the heart action.

CASE 5.—J. G., a Mexican mechanic, aged 28, of apparent good health, went to the office of Dr. P. for a cellulitis of the arm. A physician from an adjoining office was called to assist in operating. There was no discoverable heart trouble or contra-indication to an anesthetic.

Following some struggling efforts which the patient made during the early stages of anesthesia, the respirations stopped and all efforts to reestablish them failed.

The physician who gave the chloroform told me that he thought the cessation of the heart action occurred almost simultaneously with the failure of respiration, but of this he was not positive.

An autopsy performed by the police authorities is said to have revealed slight atheromatous changes in the heart and arteries.

CASE 6.—John M., a Swiss, aged 26, was admitted to the hospital April 24 under service of Dr. W. with extensive cellulitis of face and neck. The patient had difficulty in swallowing and some obstructive dyspnea, but was not cyanosed. The patient was operated on shortly after admission, as his condition was considered quite grave.

While incision was being made, the respirations very suddenly ceased. Because of the possibility of an obstructive edema, a tracheotomy was quickly done and every effort made to reestablish respirations, but all efforts were entirely unsuccessful.

In these cases of sudden death during the administration of chloroform, it will be noted that death occurred in all of them during the early stages of anesthesia. Cessation of respiration was the first symptom noted in each case.

As to the increased danger from an anesthetic in this altitude—about 7,200 feet—there is varying opinion. It seems to me that with the great majority of patients it makes no difference, but in those who have suffered from prolonged wasting diseases or whose ailment is in itself aggravated by the altitude, there is added risk.

Also the anesthetists tell me that it is more difficult here to secure complete anesthesia with ether given by the drop method than when it is so administered in a lower altitude and consequent heavier atmosphere.

Calle de Gante 1.

The Knowledge of the Physician.—The physician is a servant, not a teacher of Nature. He must know what his predecessors have known, if he does not wish to deceive both himself and others.—Hippocrates.

AN IDEAL ABDOMINAL INCISION FOR PELVIC SURGERY IN THE FEMALE

CHARLES GARDNER CHILD, JR., M.D.
NEW YORK

In approaching the pelvic organs in the female for the purpose of surgical treatment, the incision used should possess numerous features advantageous alike to both operator and patient.

To overcome two great objections to the median-line incision—shock and postoperative hernia—the vaginal incision was devised and extensively practiced. This incision, while greatly minimizing the amount of shock and practically abolishing postoperative hernia, had the additional advantage of affording more direct access to the field of operation. It enjoyed well-deserved popularity, but that it had its limitations was soon evident. At the Second International Congress for Gynecology and Obstetrics, held at Geneva in 1896, Küstner presented a new method of opening the abdomen in place of the median-line incision. The cut was made in the region of the suprapubic hair in a transverse direction through the skin and subcuticular tissue; the fascia and peritoneum being incised vertically in the median line. He advocated this modification because of the objection on the part of the laity to the deformity caused by an ugly median-line scar, and recommended it for simple cases, such as the separation of adhesions and ventral fixation.

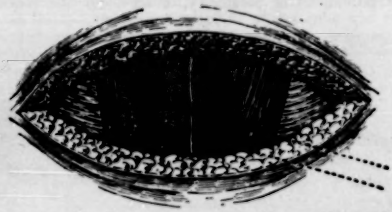


Fig. 1.—The transverse incision, with the pyramidales and the abdominal recti exposed.

At the same congress, Rapin presented his *incision esthétique*, which was identical in all respects with the one described by Küstner. In 1900, four years later, Pfannenstiel modified these by incising the fascia likewise in a transverse direction, separating it above and below from the underlying muscles, entering the peritoneal cavity by a vertical incision through the linea alba and peritoneum. Aside from the cosmetic standpoint, his modification was of great importance for it was designed to abolish that "bugbear" of all abdominal surgeons—postoperative hernia.

The principal difference between the Küstner-Rapin incision and that of Pfannenstiel is that in the latter the fascia, being incised transversely, is left completely intact over the vertical incision in the linea alba. By this means the unfavorable tension exerted by the transverse and oblique muscles of the abdomen on the fascial scar in the median-line incision is disposed of. Pfannenstiel hoped that this incision would afford absolute protection from postoperative hernia, and I believe I do not exaggerate when I say that his dream has been fully realized. To him belongs the honor of being the first to plan, execute and publish the transverse fascial incision which had been independently practiced, however, by both Stimson of New York, and Hartman of Paris. The Pfannenstiel incision overcame many of the objections to both the median-line and vaginal incisions, and its many advantages were so apparent that it met with immediate and almost universal favor. An extensive trial of this incision has led me to make certain modifications and changes in his technic, designed to meet the requirements of the average case better, and it is because of these radical departures and because the incision I have evolved seems to me so near perfection that I have ventured to call it "ideal."

TECHNIC

With the patient in the Trendelenburg position, a transverse incision 2 to 4 inches in length is made in the edge of the suprapubic hair, or in the transverse skin fold usually found just above it. A straight cut is used rather than a semilunar one, because experience has shown that it severs fewer blood-vessels, giving rise to less hemorrhage and causing less interference with the subsequent nutrition of the flaps. It is seldom necessary to ligate more than two or three vessels in the wound, and often no ligatures at all are needed, thus greatly reducing the amount of foreign material introduced into the wound, all of which has an important bearing on wound-union.

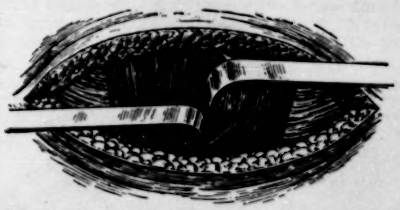


Fig. 2.—The pyramidalis drawn aside and the recti being separated.

The wound is now stretched with the fingers, thereby slightly enlarging it and better exposing the underlying fascia. After operation, contraction back to the original size of the cut occurs. The fascia is next incised in the same direction and to the same extent, 1 to 2 inches above the symphysis pubis. The extent of the fascial incision to either side should be limited by the outer borders of the recti muscles, and if a larger opening is required, the incision should be curved upward, or follow the outer borders of the rectal sheaths directly upward, to avoid injury to the external rings. Dissecting the fascial flaps free from the underlying muscles, which can readily be done by blunt dissection with the finger (from the linea alba they must be cut with the scissors), discloses the two recti overlapped by the pyramidales. The right pyramidalis is separated at its outer edge from the underlying rectus but not from the linea alba, and retracted to the middle line. Under this the rectus is separated from the middle line and retracted outward (Figs. 1 and 2).

The peritoneum now lies exposed, and the abdominal cavity is opened by a vertical incision. The lower flap is retracted by a self-retaining retractor, preferably that of Doyen, and the upper one by a small movable abdominal retractor (Fig. 3).

These are the only permanent retractors required. Of great assistance during the remainder of the operation

are two Pryor trowels, which make possible perfect retraction in what would otherwise be inaccessible portions of the operative field, and which can be made to illuminate many a dark area with light reflected from their polished concave surfaces.

When the operation is completed, the wound is closed in three layers—the peritoneum, fascia and skin.

ADVANTAGES

The abdominal opening afforded by this incision is in close proximity to the pelvic organs, being directly above them.

The operator works to greatest advantage as the opening centers the field of operation, instead of being above it, as in the median-line incision, and he has free access in every direction without being obliged, as Kelly says, "to work in the lower angle of a rigid V."

Retraction is easy, as the muscles, being freed from their overlying fascia, are readily drawn aside and can be kept out of the way with the use of very little force on the retractors. As the long axis of the incision runs

Fig. 3.—The incision and separation of the muscles and fascia completed, with the pelvic cavity and organs exposed.

in the same direction as the pelvic organs, from the adnexa on one side across the fundus and adnexa of the other side, a maximum exposure of the field of operation is afforded by a minimum length incision.

The advantages derived by the patient on whom this incision is used are of extreme importance: (1) The comparative freedom from shock and postoperative complications is quite noticeable when using this method after the old median-line incision: (2) the perfect exposure, with the ease of access to the pelvic organs which it affords, greatly limits the amount of intra-abdominal manipulations necessary; (3) the intestines are kept in place, well covered and amply protected by the upper flap; (4) few, if any, laparotomy pads are required, except in pus cases; all of which items greatly reduce the amount of intraperitoneal traumatism and give a convalescence proportionately smooth.

In the series of cases to which I shall refer more in detail later on, the only postoperative complication met with was a mild bronchopneumonia in one case. There were no acute dilatations of the stomach and not a case of ileus; in fact, abdominal distention was conspicuous by its absence. With the transverse abdominal incision tendency to postoperative hernia is reduced to a minimum, and I do not hesitate to say that such a complication with the transverse suprapubic incision which I have described is practically impossible. I have never encountered or heard of a case, and my interest in the subject has made me more than ordinarily vigilant.

The incision is intermuscular, made in the strongest part of the abdominal wall, the lower third of the distance between the symphysis pubis and the umbilicus, a region most abundantly supplied with strong muscular tissue, and one where spontaneous hernia is seldom, if ever, seen. Here the recti, two strong thick muscles, lie close together, and are further strengthened by the overlapping pyramidales. On the other hand, the upper two-thirds of the distance between the symphysis pubis and the umbilicus is, with the exception of the abdominal rings, the weakest part of the abdominal wall, where spontaneous hernia is often seen. Here the recti broaden and thin out, separating to pass the umbilicus above, and the additional support of the pyramidales is lost. Hernia here frequently results from the simple separation of the recti and thinning of the fascia of the linea alba consequent to the stretching produced by the enlarged uterus of pregnancy, or an abdominal tumor.

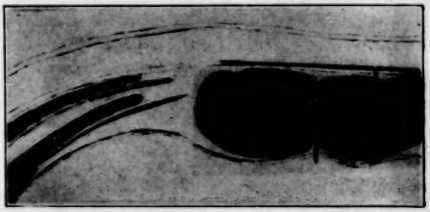


Fig. 4.—Cross-section of abdominal wall at site of incision, showing the path of entrance to the abdominal cavity by author's technic.

By all means, a region to keep away from and not to weaken further by operative invasion.

To secure the strongest wound after operation, the incision should be made in the strongest part of the abdominal wall by a technic that interferes as little as possible with the integrity of the fascia and muscles.

Just behind the peritoneal scar of this incision lies the bladder which, as it fills, pushes the intestines away, preventing them from adhering to the wound. In none of the cases in which I have had occasion to reopen the abdomen did any such adhesions exist.

Drawings 4 and 5 show in cross-section the path of entrance to the abdominal cavity in my incision and in that of Pfannenstiel. In the former the recti are close together, the linea alba a line only, and if the intestines should work their way through this narrow space between the recti, the pyramidalis would have to be passed before the fascia was finally reached.

In the latter the recti lie farther apart and are not so thick; the linea alba is broad and is cut to free the recti, so if weakened as a result of the operation, they would more readily yield to any advance of the intestines, and the main support of the abdominal wall would then depend solely on the fascia.

The cosmetic result leaves little to be desired. After six months or a year, the fine, unpigmented linea cica-

trix is hardly to be seen, and if situated in the pubic hair is completely hidden from view—a minor point possibly, but worth considering in a patient with neurasthenic tendencies, where a visible abdominal scar serves ever as a constant reminder of the past.

The better to set forth the possibilities of this incision I have appended a brief report of one hundred consecutive cases in which it was used. In this series there was not a death; only one postoperative complication, a mild bronchopneumonia; 14 per cent. of the patients were septic at time of operation, yet primary wound-union was obtained in 97 per cent. The following pathologic conditions were encountered:

	Times
Retrodisplacements of the uterus	37
Chronic salpingitis	30
Cystic enlargement of the ovaries	18
Ovarian cyst	15
Hydrosalpinx	10
Pyosalpinx	10
Fibromyomata	10
Corpus luteum cyst	6
Tubal pregnancy	4
Tubo-ovarian abscess	4

The operative treatment carried out was as follows: The round ligaments were shortened thirty-nine times; the round and uterosacral ligaments four times; the ovarian ligament twenty-three times; salpingectomy was done thirty-four times; resection of the tube was performed twenty times; and in fourteen cases in which inflammation had caused its occlusion, the distal end of the tube was opened; oophorectomy was performed thirty-one times, and resection of the ovary for cystic enlargement nineteen times; in seven cases the uterus was removed by a supravaginal hysterectomy, five times for fibromyoma, and twice for suppurative infection; the appendix was inverted four times; ligated and removed forty-one times.

CLOSURE OF THE WOUND

In ninety-seven of the cases the fascia was united by a continuous mattress suture of silkworm gut, and the skin with a subcuticular stitch of the same material. The ends of these two sutures were brought out through the skin at either end of the wound and tied together over a wound-covering of gauze by the method[1] I described and illustrated in 1907.

In two cases silver wire and in one aluminum-bronze wire were used, instead of the silkworm gut. The nonabsorbable sutures were withdrawn by the end of the second week.

WOUND-UNION

The number of cases in which primary union occurred was ninety-seven, an extremely high percentage.

Although the method of closure and the use of noninfectable suture material were probably largely responsible for such a favorable showing, still I believe several points in the technic of the incision itself to be contributory. For instance, it has been my experience, though Pfannenstiel and Menge report to the contrary, that the transverse incision severs very few blood-vessels of any size. It appears to parallel the larger vessels in the suprapubic region, and as few are cut, there is a minimum interference with subsequent tissue nutrition, and little necessity for the use of ligatures—two most potent causes of wound infection. Likewise the perfect exposure of, and easy access to, the field of operation limit greatly the traumatism inflicted on the tissues from frequently shifted retractors. The retractor of the lower wound-flap when once placed is permanent throughout the operation, while the retractor of the upper flap is not often moved. The trowel retractors, the only ones frequently moved, seldom touch the edges of the wound.

Failure to secure perfect primary union in the wound occurred only three times. An unabsorbed blood-clot was the cause in one case; a serum accumulation in another; and in the third, the case in which aluminum-bronze wire was used in closing, the wire, by its own elasticity, tended to assume a straight line, and on the sixth day after operation was found lying loose in the wound, having, in the process of straightening out, completely freed itself from the tissues.

While on the subject of wound infection, it is interesting to note that fourteen of the cases in this series were suppurative processes, septic at time of operation, and yet in these the percentage of primary union was 100. I call attention to this point particularly because among those who have used the transverse incision extensively, the idea seems to prevail that it is more easily infected than the median-line incision. Halsted and Daniel having gone so far as to advise against its use in suppurative processes. My experience certainly does not justify any such conclusion, but rather the reverse.

The average maximum postoperative temperature for the series was 100.5 F., with a pulse of 95, which occurred on the second day. On an average, the temperature reached normal, with a pulse of 84, between the third and fourth day.

Fig. 8.—Cross-section of abdominal wall at site of incision, showing path of entrance to abdominal cavity by Pfannenstiel's technic.

INDICATIONS

Though intended primarily for pelvic surgery, the transverse suprapubic incision, with a little practice in its use, admits of a much wider field of application. As an illustration, allow me to refer again to the above-mentioned series. Among the ovarian cysts there were several which extended well up out of the pelvis, and the upper extremity of one, a dermoid, was on the level of the umbilicus. Yet in all, after aspiration of the fluid contents, the sac was easily drawn through the wound, ligated and removed. In two cases numerous intestinal and omental adhesions were encountered, but were easily separated as the sac was brought through the wound.

In several of the fibromyoma cases the tumor extended well up out of the pelvis, and in one reached as high as the umbilicus. In these the tumor-mass was decreased in size by morcellation until the uterus could be delivered into the wound, and supravaginal hysterectomy performed. Four of these cases were enucleations only; in one the fibroid was intraligamentous. In none was any difficulty encountered because of the low situation of the incision, or on account of its small size.

1. Child, C. G.: THE JOURNAL A. M. A., Jan. 19, 1907, p. 221.

V. 58
1912

Howard Kelly, in a recent article, has called attention to the transverse suprapubic incision for exposing the interior of the bladder extraperitoneally, and considers it ideal for this purpose. In this I heartily agree with him and believe it well adapted for intraperitoneal bladder surgery as well. Four years ago I used it in repairing a vesicovaginal fistula. The fistula was situated at the base of the bladder between the ureters, in a location inaccessible for purposes of repair from the vagina below, yet I was able to free the bladder so as to deliver its base well into the field of operation and repair the fistula with the utmost ease.

Two cases requiring a second operation at intervals of seven months and two years, respectively, afforded opportunity to observe to what extent the first incision had changed the normal relations of the tissues. In both, the skin cicatrix was scarcely visible, in the fat there was no evidence of cicatricial tissue, while in the fascia in the first case there was only a slight thickening, and in the second I was unable to find the site of the original incision. On opening the rectal sheaths the relations of the muscles appeared as normal, no atrophy being apparent. No adhesions to the abdominal wall were present in either case.

CONCLUSIONS

I would summarize the advantages of the transverse suprapublic incision as follows:

1. Freedom from shock and postoperative hernia.
2. Close proximity to the pelvic organs, with easy access to the field of operation.
3. High percentage of primary wound-union.
4. Cosmetic perfection.

163 East Seventy-First Street.

AN APPARATUS FOR THE INTRAVENOUS INJECTION OF SALVARSAN WITH SALT SOLUTION PRECEDING AND FOLLOWING

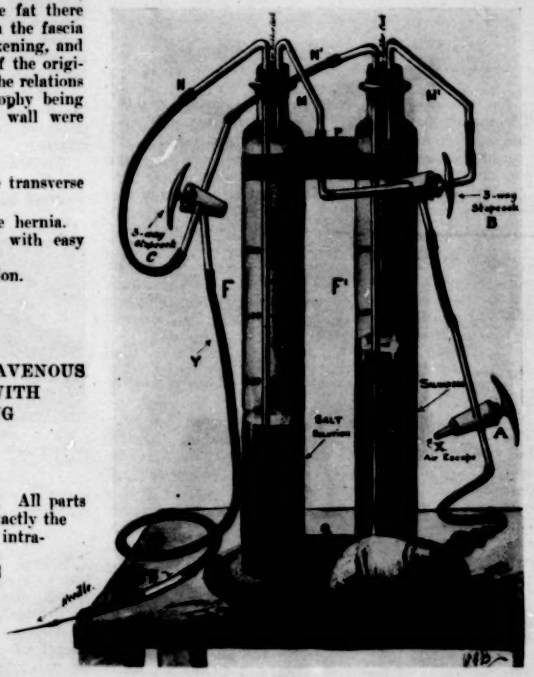
W. B. DAKIN, M.D.
CHICAGO

The operation of this apparatus is simple. All parts are sterilized and the solutions made up in exactly the same manner as for any other method of intravenous administration.

The apparatus consists of two cylindrical glass jars *F* and *F'*, each of 500 c.c. capacity. A rubber stopper fits accurately into the top of each jar and is perforated by two pieces of glass tubing, *K* and *L*, tubes *K* and *K'* reaching to the bottom of the jars, and *L* and *L'* extending only through the stoppers. By means of *L* and *L'* the air-pressure in the jars is increased or diminished. Tubes *K* and *K'* are connected by short pieces of rubber tubing *N* and *N'* with the three-way glass stop-cock *C*. About three feet of small caliber rubber tubing connects stop-cock *C* with the injection needle. Glass tube *R* is inserted about 2 inches from the needle and enables the operator to see the back flow of blood when the needle enters the vein. The glass tubes *L* and *L'* are connected by short pieces of rubber tubing to stop-cock *B*. Stop-cocks *A* and *B* are connected in a similar manner and an ordinary atomizer bulb attached to *A*. Stop-cock *A* differs from *B* and *C* in that it has an air exit at *X*. On turning *A* in the proper direction air will escape from jar *F*. This avoids removing the atomizer bulb and hastens the back flow of blood at *R* when the needle enters the vein. The blocks of wood, *P* and *Q*, made to fit accurately between jars *F* and *F'*, are held in place with adhesive plaster. This enables the apparatus to be handled as a one-piece affair.

The salvarsan solution and the salt solution kept at a temperature of 98.6 F., are placed respectively in jars *F* and *F'*, and the entire apparatus placed in a large jar of sterile water at a temperature of 110 F. By the time the fluid escapes into the vein, through the needle, it is at the proper temperature.

The patient being prepared and all connections on the apparatus made, the stop-cocks *B* and *C* are set so that salt solution will be forced out of jar *F*. This is accomplished by pressure on the atomizer bulb. As soon as the saline solution escapes from the needle, stop-cocks *B* and *C* are adjusted so that salvarsan is forced out of jar *F'* to just beyond the stop-cock *C*. With one hand the rubber tubing leading to the needle is constricted at point *Y*, and *B* and *C* again adjusted for saline solution to escape from jar *F*. The operator then releases his hold on the rubber tubing at *Y* and saline solution is allowed to flow through the tubing until it escapes from the needle at the proper temperature. Meanwhile the needle is held above the apparatus so that all air escapes from the tubing.



Apparatus for the intravenous injection of salvarsan with salt solution preceding and following.

The rubber tube from *C* to the needle is now clamped off at *Y* with artery forceps and stop-cock *A* turned so that air escapes from jar *F* at *X*. The apparatus is now ready for the operator to insert the needle into the vein.

After the vein is punctured and blood appears in glass tube *R*, the tourniquet is quickly removed from the patient's arm and stop-cock *A* adjusted so that air may be forced into jar *F*. Pressure is now made on the atomizer bulb and 20 to 30 c.c. of saline solution forced out of the jar. If no swelling appears around the vein, stop-cocks *B* and *C* are properly adjusted and salvarsan solution injected. As soon as the desired amount of salvarsan solution has been injected, stop-cocks *B* and *C* are again so adjusted that saline solution is injected. About 20 to 30 c.c. of this is allowed to flow into the vein before the needle is withdrawn. If the vein has been exposed, the wound is irrigated with saline solution and then sutured.

The advantages of the combined apparatus are:

1. Salvarsan solution is not injected until the needle is positively in the vein.
2. No salvarsan escapes into the tissues on withdrawing the needle from the vein.
3. Accurate amounts of the drug may be given.
4. Positively no air or foreign particles can enter the vein.
5. The apparatus is compact, all within reach, and the injection, if need be, can be given without assistance.

I wish to acknowledge my indebtedness to Dr. L. E. Schmidt for the privilege of using this apparatus in about 100 cases.

64 West Randolph Street.

FUNGOUS TRACHEOBRONCHITIS

GEORGE HOWARD HOXIE, A.M., M.D.
AND
FREDERICK C. LAMAR, B.S., M.D.
KANSAS CITY, MO.

Recently there have come under our observation two cases of bronchitis in which careful examination of the sputum revealed the presence of fungus-stalks as the only causative organism. Attempts to grow the fungi failed, and therefore their identity was not definitely established. The absence of literature on the subject and the failure of our cultures caused us to be doubtful as to the correctness of our conclusions. But the recent paper by Dr. Norman Bridge on streptothrix,[1] in which he calls attention to the difficulty of cultivating and identifying such fungi, leads us to publish these case reports.

In the first case (that of Dr. Hoxie) the symptoms were those of a tracheobronchitis with spasmodic cough that faintly reminded one of pertussis. The age of the patient and the relief obtained by discharging the pin-head-sized nodules made such a diagnosis improbable.

In the second case (that of Dr. Lamar) hemorrhage was the prominent symptom. But the complete absence of tubercle bacilli from the sputum, and also of râles and dulness in the chest, together with the finding of these stalks and round bodies in the sputum led us to believe that it was a fungous disorder rather than a tuberculous one.

The case histories are as follows:

CASE 1 (reported by Dr. Hoxie).—*Patient.*—J. R., a railroad freight agent, aged 55, called at my office Sept. 10, 1910, and stated that he had had a "cold" for a week and that for the last four nights he had had spasmodic closure of the windpipe; that is, he would retire and fall into his usual deep sleep; and after about three hours would be suddenly awakened by a feeling of suffocation which could be relieved only by very violent coughing and retching. He felt that the closure was located under the sternal notch. The patient was a vigorous man, healthy except for a chronic postnasal catarrh with accompanying deafness (chronic otitis media). He spends his spare time in his garden cultivating flowers and vegetables. His diet is chiefly vegetable. His work is in a very dusty part of the West Bottoms.

Examination.—The patient's temperature, pulse, and respiration were normal. Inspection of the throat and larynx was negative. Auscultation of the chest revealed an occasional respiratory "flutter" at the sternal notch. The sputum was usually colorless and frothy, but after the severe coughing paroxysms contained many small particles the size of a pin-head, yellowish-white in color, hard to break up on the slide, resistant to antiformin. Under the microscope such portions of the sputum presented stalks of a fungous type in great abundance. No other pathogenic organism was discovered.

Fig. 1.—Fragments of fungus found in sputum of patient in Case 1.

Treatment.—In spite of the usual sedative treatment the attacks grew worse until the patient was afraid to sleep more than an hour at a time and had the nurse waken him in order to cleanse out his throat and bronchi. He was kept in his room at an even temperature day as well as night. At the suggestion of Dr. J. E. Sawtell, who saw the patient at this time (Sept. 16, 1910), adrenalin inhalant was sprayed frequently into the larynx and trachea and the compound tincture of benzoin inhaled with steam. The bromids had no effect. Heroin and morphin had only a temporary quieting effect. On September 18, a fifteen-drop dose of the saturated solution of potassium iodid was ordered every four hours, and the inhalations were continued. From that time the patient gradually improved and after two weeks was allowed to go back to his work.

Course.—In January he still occasionally coughed up the stalks, but by the aid of sprays and inhalations was fairly comfortable.

May 12, 1911, he reported that he still had "tickling" in the throat. But the sputum was frothy and no stalks were found.

Sept. 19, 1911, patient reported that he had been free from trouble since the spring. He had taken seventeen office treat-

1. THE JOURNAL A. M. A., Nov. 4, 1911, p. 1501.

ments from a rhinologist for his postnasal catarrh. The rhinologist had found no traces of a fungus; nor did he treat the throat.

Attempts to grow the fungus were unsuccessful. Besides the stalks there were in the sputum many oval bodies the size of epithelial cells. That the seat of the infection was below the pharynx was shown by the fact that scrapings from the tongue and mouth did not reveal the stalks; nor did the sputum contain them except after the strangling cough. Probably the fungus was an aspergillus.

CASE 2 (reported by Dr. Lamar).—*Patient.*—Mrs. W., aged 39. Whooping-cough and the regular diseases of childhood during early life. For several years she had suffered from stomach trouble, for which she was persuaded six years ago, by a friend, to take treatment at a sanatorium, where she spent two months adhering strictly to the vegetarian diet; she has continued to do so to a marked degree since her return home five years ago.

History.—For one year she has noticed a soreness of the throat, consisting, as she describes it, of a dryness or constant

Fig. 2.—Fragments of fungus found in the potato culture from Case 2.

irritation and located directly opposite the sternal notch or about the bifurcation of the bronchus. The trouble itself has not been severe but fearing tuberculosis she has taken treatment, consisting of fresh air, oil-emulsions and reconstructives for the past nine months. Coughing is frequent and of a dry hacking nature—occurring as the patient states, more frequently at night on going to bed; that is, it is aggravated by the reclining position.

Examination.—July 7, 1911, during an attack of coughing quite a profuse (?) hemorrhage occurred. I was called to the home the next day. The examination of the lungs was negative and the other conditions found did not justify a positive diagnosis of tuberculosis. Specimens of the sputum were submitted to Dr. Trimble of the University of Kansas, who reported that he found no tubercle bacilli, but on the contrary, did find a fungus which he could not identify. The temperature arose in the afternoons to 99.5 F. or 100.5 F. In the morning, on one occasion at least, the temperature was subnormal. Pulse and respiration were normal.

Blood Findings.—Hemoglobin 90; coagulability normal; red cells 4,248,000; white cells 7,600; polymorphonuclears 68; eosinophils 4; lymphocytes 6; mononuclears 21; mast cells 1.

At frequent times since, on coughing, the material cleared from her throat has been streaked with blood, but usually it is of a grayish frothy nature containing small white bodies in which we have found these stalks of a fungus. In general, however, expectoration is comparatively scant.

Treatment.—There are slight voice changes, the voice having a slightly hoarse and husky tone, but the laryngoscopic examination was negative. The treatment consisted in outdoor sleeping, the strengthening of the patient's diet by the addition of meats and the administration of iodids in the form of syrup hydriodic acid (potassium iodid was not tolerated by the patient's stomach). Iodin inhalations were given in the form of Parke, Davis & Co.'s iodin inhalant.

Course.—Under this treatment the patient felt comparatively well, except on cold rainy days. On such days she had an aggravation of the coughing and soreness of throat and the expectoration of the blood-streaked sputum. At the beginning of October the patient went to Arizona for the winter.

We were able to secure a potato culture of the fungus found in the second case, but in this culture nothing but the roots and stalks appeared, consequently we could not identify the growth. On agar no growth resulted. Professor Billings, of the University of Kansas, also failed to secure a satisfactory growth on potato and was rather of the opinion that the stalks were those of the Mucedineæ. Some slides from our potato culture were submitted to Professor Ravenel, of the University of Wisconsin, who reported that he was unable to make anything out of them.

In these two cases the source of infection may have been the food, because the patients were both vegetarians. In Case 1 the patient had a parrot as a pet; but this was not a possible source of infection in Case 2. These findings contrast with those of the French, who found the fungous infections chiefly among pigeon growers.

The literature on fungous infection of the trachea and bronchi seems very scanty. In the standard text-books on medicine only Kelly and Dieulafoy mention the subject. The former merely refers to recent work on the subject. The latter goes into the matter of aspergillosis of the respiratory tract very thoroughly. Rolleston and Latham[2] summarize the British experience with the fungi and in particular with aspergillosis.

We have no American case reports except those on streptothrix (as, for instance, Case 13 in Dr. Bridge's report mentioned above).

We believe that the condition is more frequent in America than its absence from medical literature would indicate. We make this report in the hope that it will call out reports of similar experiences and lead to the identification of the fungi responsible for the condition.

Argyle Building.

2. Rolleston and Latham, in Allbutt's System, 1909, v, 440.

Monstrosities.—The Chaldeans read in the starry heavens the secrets of the future and rapidly learned to transfer to the monstrous infant, born under this or that astral combination, the meaning of the stellar message, and so in ancient Babylonia the birth of a babe of doubtful sex meant an approaching calamity to the land, while the appearance of one with an imperforate anus proclaimed a famine. Similar astrologic beliefs were in vogue in Europe during the Middle Ages; but they did not reign alone, for a transference of teratologic powers had, it was thought, taken place from the deity to the devil, and to the malign influence of the Tempter and his emissaries were ascribed monstrous and malformed births.—J. R. Torbert in *Boston Medical and Surgical Journal.*

CONVULSIVE MOVEMENTS OF THE FACE: THEIR DIFFERENTIAL DIAGNOSIS

EFFECT OF ALCOHOLIC INJECTIONS

ALFRED GORDON, M.D.
Neurologist to Mount Sinai, Northwestern General and Douglas Memorial Hospitals
PHILADELPHIA

Convulsive movements of the face present themselves under three principal forms: spasm, tic and epileptic twitchings. As to the latter, they are usually associated with generalized epilepsy or with focal epilepsy in which the arm or leg or both on the same side are affected. Cases in which the epileptic fit is confined to one side of the face may at times present some embarrassment in diagnosis. But, on one hand, the paroxysmal character of the twitching, the presence of other symptoms characteristic of epilepsy, such as pallor of the face, mental hebetude, loss of consciousness, postepileptic exhaustion —on the other hand, the absence of the characteristics of plain spasm of the face, which will be discussed in detail later, will render the diagnosis of epilepsy quite easy. Thus the deviation of the ala nasi, the depression of the chin, the paradoxic synergy, etc., are totally absent. The most important differentiating feature, however, lies in the successive and progressive contraction of the different muscles of the face, but not of a simultaneous contraction of the entire half of the face which is seen in facial spasm of non-cortical nature. Thus for example, at the time of the attack the lower lip is turned up first, then the angle of the mouth is drawn, then the musculus frontalis contracts, finally the eye closes. The disfigurement which the face undergoes in any spasmodic contractions of its muscles is here done successively and progressively, contrary to that of facial spasm of non-cortical nature. The closure of the eye in epileptic attacks and the wrinkling of the forehead are bilateral and asymmetrical, while in facial spasm they are confined to the side of the face involved and in palpebral tic the closure of the eyes is bilateral, but symmetrical.[1]

Tic and facial spasm are two phenomena which are very frequently encountered. Their recognition and differentiation are of considerable importance from a therapeutic standpoint. The state of our knowledge of these two facial manifestations is at present so far advanced that an error in diagnosis is exceptional.

TIC OF THE FACE

Tic of the face is characterized by a sudden and abrupt contraction of one or of several muscles of the face. What is important is that the muscular contraction is always and invariably the same as to the range and location, but the invaded area does not correspond to a well-defined anatomic distribution of a certain nerve or nerves, contrary to what is observed in spasm. The movement of tic usually reproduces certain automatic acts of physiologic nature, accomplished for a certain purpose, but in an exaggerated manner. For example, tic of the eyelids produces exactly the act of their sudden closure done to protect the eye from penetration of a foreign body.

Tic has a tendency to spread and invade other functions, so that the twitch of the face may be accompanied by a sudden protrusion of the tongue, or by a laryngeal noise, by a scream or by a certain gesture in other parts of the body than the face, such as a sudden outstretching of the fist or a kick of the foot. Gilles de la Tourette described various tic movements accompanied by coprolalia, viz., by enunciation of profane words or sentences for which the patient finds an irresistible impulse.

Another characteristic feature of tic is the fact that the twitchings can be controlled to a certain extent by an effort of the patient's will. Inhibition is therefore possible. The reason of it lies in the cortical nature of the phenomenon. Tic is a psychic malady and the patient's mental state can participate largely in inhibiting it. On the other hand, when a patient makes an effort to arrest or rather to prevent the convulsive movement for a certain time, the sensation of satisfaction he experiences after he has exhausted the inhibition and has given vent to the tic movements is another proof of the presence of a psychic factor in tic. The desire of indulging in tic movements after a more or less prolonged period of voluntary repression is great. The patient's tic becomes thus a habit, and the German name for this malady, viz., *Gewohnheitskrankheit*, is well appropriated.

To sum up, one may say that the chief characteristic feature of tic lies in exaggeration or disfigurement, so to speak, of physiologic gestures or of mimicry.

FACIAL SPASM

An altogether different condition is observed in facial spasm. Here one fails to find the least tendency to reproduce physiologic acts; otherwise speaking, there is no purposive act. Quite on the contrary, we observe here opposite to normal or to physiologic acts. When, for example, normally one eye closes voluntarily, the corresponding brow descends. In facial spasm the inner portion of the brow is elevated at the moment the eye begins to close.

Let us analyze the facial spasm as shown in Figures 1 and 2. At first glance it can be seen that their spasm is illogical and without any reasonable expression; there is no resemblance to ordinary normal mimicry of the face. In the woman the entire left side, in the man the entire right side of the face is involved. The forehead on the affected side is wrinkled, the orbicularis palpebrarum closes the eye; there is a simultaneous contraction of the frontalis and orbicularis palpebrarum (paradoxical synergia of Babinski); the zygomatic muscles deviate the angle of the mouth and according to the mode of the muscular contraction the angle of the mouth is either drawn laterally or elevated. The nose is curved toward the affected side and the chin presents a characteristic depression on the diseased side. The latter cannot be seen on the man, as it is masked by his beard.

A close study of these two faces shows that while the spasm affects an entire half of the face in both, nevertheless there is an essential difference in the character of the muscular contractions. In the woman the affected side, while being drawn up, presents at the same time, so to speak, a fascicular muscular contraction. Otherwise speaking, the half of the face is in a tremulous state. It is a condition identical with what one not infrequently experiences when one's eyelids tremble. It is practically a very rapid clonic contraction. Indeed, the patient's half-closed eye illustrates to the best advantage the state of the surrounding muscles. If we compare her eye with that of the man, the above-mentioned fascicular or tremulous contraction becomes very evident. In the man the eye is also half closed as in the woman, but his eyelids are at rest while the surrounding muscles are contracting. The contractions of his muscles are manifestly of wider range; they are coarse. The

1. Vincent: Rev. Neurol., 1907, p. 1299.

V. 58
1912

latter is probably due to less rapid twitching than in the woman, as can be seen from the number of wrinkles and from their depth. The muscles of the cheek in the woman present, except the nasolabial fold, no wrinkles at all, while in the man the entire side is deeply wrinkled. We must therefore conclude that while both faces are affected with a hemispasm, nevertheless two kinds of muscular contractions may occur: one fine or fascicular or tremulous, the other gross or coarse. This peculiarity has not been pointed out by writers, but the photographs presented here justify my contention.

It has been mentioned above that the muscles involved in tic do not correspond as a rule to a well-defined anatomic distribution of a nerve. In facial spasm, on the contrary, the convulsive movements are produced solely in the area of distribution of the facial nerve and, according to the case, they predominate in the upper or the lower portion of the nerve. In the first case the frontalis and the orbicularis palpebrarum alone will be involved, in the second case the muscles of the lower part of the face will be involved. When the lower facial

Fig. 1.—A woman suffering from spasms involving the entire left side of face (Case 1).

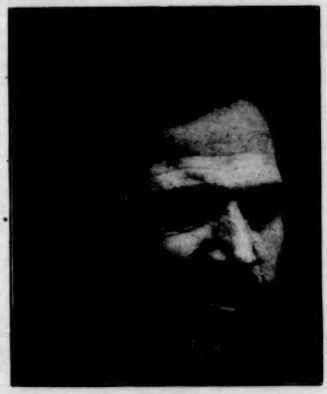


Fig. 2.—A man suffering from spasms involving right side of face (Case 2).

nerve is involved, in addition to the muscles of the face, also the muscles of the neck on the same side not infrequently participate in the spasmodic twitchings.

Another peculiarity of facial spasm is its occurrence during sleep; also any effort of will or attention is incapable to arrest, interrupt or prevent an attack. This circumstance, as we have seen, does not occur in tic. In the latter a psychic element plays a certain rôle; in the former a psychic influence has no bearing on the condition. Curiously enough, in the majority of cases of tic we find a hereditary predisposition to the same affection or to some other nervous disorders; also in the patients themselves is observed a special mental makeup, such as eccentricities or other bizarre features, in other words, a mental instability.

If the view concerning the nature of tic is well established, the pathogenesis of facial spasm is still debatable. If the facial muscles supplied by the seventh nerve are in a state of stimulation, the latter may originate either in the seventh nerve itself or in its nucleus, or else in any of the sensory fibers of the fifth nerve. A reflex arc is established; an irritation of the sensory fibers of the palpebral mucosa, or of the cornea which are supplied by the fifth nerve, is transmitted to the nucleus of the seventh nerve, and thence to the facial nerve itself. As the latter supplies the orbicularis palpebrarum, a spasm will ensue. As another illustration of the existence of this reflex arc we may mention "tic douloureux." Here the twitchings of the face are the result of excitation of the sensory fibers of the fifth nerve, viz., of the centripetal fibers of the arc. But a close observation will show that the convulsive movements of "tic douloureux" are of an altogether different character. They do not resemble and are therefore not identical with those of facial spasm. The former do not present the distinguishing features of the latter, such as fascicular or coarse muscular contractions, deviation of the nose, depression of the chin, closure of the eyelid, elevation of the angle of the mouth, etc. The muscular contractions accompanying the neuralgia are not of the type of facial spasm, but of tic. On the other hand, it seems reasonable to admit that an irritation of sensory or centripetal portion of a reflex arc should be followed by a motor symptom. If it could be demonstrated, says Babinski, that a lesion of the trigeminus alone is followed by a facial spasm, the dependence of the latter on trigeminal neuralgia will be established. Such an observation exists. Bouchaud[2] reports a case in which a dental affection developed a trigeminal neuralgia; convulsive movements of the face typical in all particulars of facial spasm followed each attack of neuralgia brought on by mastication, by cold air, etc. There was no indication of a lesion of the seventh nerve. Here the cause of the spasm lay exclusively in the fifth nerve. The irritation of the sensory nerve produced by a carious tooth is transmitted to the nucleus of the seventh nerve. This observation proves, I believe, that Brissaud's contention is correct. This author claimed for a long time that an irritation of any segment of the reflex arc is apt to cause a facial spasm, whether it is in the centripetal, centrifugal or in the nucleus of the nerve. Babinski, on the contrary, believes that an irritation of the peripheral portion

2. Bouchaud: Rev. Neurol., 1908, p. 901.

V. 191

of the seventh nerve is the sole cause of facial spasm. Bouchaud's observation speaks against the latter's exclusivism. It is true that in the majority of cases the affection is peripheral. It can be demonstrated that by electrical stimulation of the seventh nerve a facial spasm with all the characteristic symptoms described above can be reproduced with great precision. The occurrence of spasmodic contractions in cases of facial palsy is also in favor of a peripheral cause of the spasm. Not infrequently we observe that a facial spasm develops on the side of a palsy of long standing. Also facial spasms may precede the onset of facial paralysis or paresis. In such cases evidently the facial hemispasm and palsy depend on the same cause, and there must be a lesion of a destructive or irritating nature in the nerve trunk itself or in its nucleus. In two cases reported by André Thomas,[3] there was a neuroma on the facial nerve. In both cases facial palsy was complicated by spasm. These observations, of course, tend to prove that the facial spasm is a peripheral affection in which the centrifugal end alone of the reflex arc is involved. In fact, this is the most frequent occurrence. Nevertheless, we must not omit the fact that cases have been observed in which the lesion was in other portions of the reflex arc. The above-mentioned Bouchaud's case, for example, proves conclusively that the sensory centripetal fibers of the arc may be the direct cause of facial spasm. Besides, in a certain number of observations recorded we find facial spasm associated with other phenomena, indicative of organic lesions of the central nervous system. Thus Brissaud, Sicard and Tanon report[4] the history of a patient who, in the course of a meningo-mesencephalitis, developed a complete facial palsy on the left and a facial spasm on the right side. This case shows that the spasm was of intracranial origin, and that one lesion is apt to provoke, according to its irritative or destructive effect, either a spasm or a palsy. In Claude and Lejonne's case,[5] there were symptoms of pseudobulbar palsy with spasmodic laugh and cry. The patient presented also typical attacks of facial spasm, as it can be seen from the photographs in their article, but those spasms occurred together with spasm of muscles of pharynx and larynx, and only at attempts of deglutition or phonation. The authors believed that there were two irritative lesions: one in the cerebral peduncle, the other in the geniculate bundle. Brissaud and Sicard[6] report three cases of crossed facial spasm, viz., spasm of one-half of the face and motor disturbances in the limbs on the opposite side. The lesion was probably in the mesencephalon, affecting the pyramidal fibers on one side of the pons and involving also the nucleus of the facial nerve on the same side.

The anatomo-clinical facts discussed here lead to the conclusion that while in the majority of cases the cause of spasmodic contractions of the face is of a peripheral character, nevertheless an irritation of any segment of the reflex arc, as well as organic lesions higher up in the cerebrum, may also be considered as etiologic factors in a certain number of cases.

The facial spasm discussed here concerns the well-known form in which one-half of the face is involved (*hemispasm*). But there are other varieties. Sicard[7] reports a cause of "double spasm." Here both halves of the face are affected, either alternately or simultaneously. Meige[8] speaks of a case in which a facial spasm disappeared from one side of the face to reappear on the other side. The same author calls attention to another variety of spasms, i. e., "median facial spasm," which presents some features of the ordinary facial hemispasm and some of tic. It consists of bilateral convulsive movements, but predominating near the median line of the face. The orbiculares palpebrarum are most markedly involved. Their contractions are sudden and tonic at first (blepharotonus), and then followed by rhythmical movements. The attack lasts from a few seconds to several minutes, so that the patient is obliged to raise his head in order to be able to use his eyes, which are interruptedly closing and opening. Frequently the condition does not remain confined to the palpebræ. Other muscles participate in the spasmodic contractions, but always *bilaterally*, and to a considerably lesser extent than the orbicularis. Curiously enough, almost all muscles situated toward the *median* line of the face are displayed except the zygomatici, which are very rarely affected. Objectively, the contractions present the characteristics of spasm with this difference, that they can be controlled by mental inhibition, disappear during sleep, and that they are bilateral. On the other hand, they do not resemble tic, although the psychic factors play a certain rôle and the patient's mentality is frequently altogether analogous to that of individuals suffering from tic; also a prolonged psychomotor training gives satisfactory results. The bilaterality of the condition speaks against a peripheral lesion, and the fact that the spasmodic contractions of the face are not infrequently associated with muscular contractions in other regions than on the face, such as pharynx, floor of the mouth, tongue, jaws—one is prone to admit an irritative process in the mesencephalon as the cause of this form of spasm.

TREATMENT

The management of epileptic convulsions of one side of the face is that of focal epilepsy. In the majority of cases, whether the arm and leg on the same side are involved or not, focal epilepsy of the face is justifiable of surgical intervention on the opposite side of the skull over the motor area. Treatment with medications is of no avail in such cases, with the exception of syphilitic cases, in which mercury, iodids or salvarsan may be of benefit.

TIC

This affection is very rebellious to medications. Coal-tar products, gelsemium, opium, bromids have been tried, but unsuccessfully. Bromids, however, in conjunction with other measures which will be mentioned later, may be of benefit as a general sedative of the nervous system. Hypnosis has been experimented, but again without appreciable results. Electricity, if it ever gave any result in tic, is rather a psychotherapeutic procedure. Personally, I met with absolute failure in quite a large number of cases. Massage is equally useless. Hydrotherapy and general hygiene, appropriate in other functional nervous diseases are undoubtedly indicated as measures whose purpose is to elevate the general nutrition and that of the nervous system. In discussing the symptomatology of tic, I called attention to the relationship between the convulsive phenomenon and the mental state of the patient. I said that the tic movement can be inhibited by the patient, and that it disappears during sleep when the conscious cerebral functions are arrested. Since, there-

3. Thomas, André: Rev. Neurol., 1907, p. 1273.
4. Rev. Neurol., 1906, p. 779.
5. Claude and Lejonne: Encéphale, 1907, p. 269.
6. Brissaud and Sicard: Rev. Neurol., 1908, p. 87.
7. Sicard: Rev. Neurol., 1910, p. 119.
8. Meige: Rev. Neurol., 1910, No. 21.

fore, the morbid manifestation is associated to a certain extent with the psychic life of the individual, it is to be supposed that a methodical mental discipline could be utilized for therapeutic purposes. The initiative in this direction belongs to Brissaud. In 1893 he elaborated a certain method which, when judiciously applied, gives very satisfactory results. It consists of two procedures, i. e., voluntary immobilization of the affected muscles and movements of the immobilized muscles.

According to the first procedure, the patient is taught to immobilize his face for a gradually increasing period of time. The sittings are held daily, at first only for a few seconds and only two or three times a day. Gradually the number of daily exercises is increased and the duration of each is prolonged. Considerable patience and persistence are required, and particularly no haste should be made. The duration of each sitting should be increased very gradually. If the patient is a child, the treatment must be carried out by some trained person. An adult can be taught how to proceed. I usually advise to place himself before a mirror and watch his immobilization procedures. When a certain amount of control has been obtained by the patient, or, in case of a child, voluntary immobilization is accomplished at command, the other method, viz., voluntary movements, is taken up. The individual is taught to produce slow, regular and correct movements of those muscles which are affected by the tic.

We know that the twitchings of tic are reproductions of automatic physiologic acts accomplished for a certain purpose, but in an exaggerated and disfigured manner. By being voluntarily contracted, but in a slow, deliberate and correct manner, the affected muscles fall under control and thus become trained. Here, again, the first séances and their duration must be brief and even very brief. In this procedure, as well as in the first, fatigue must be avoided. Gradually the duration as well as the number of daily exercises are increased. The mirror method can be also utilized here as in the first procedure. The patient's training must be continuously watched, as the least error with regard to the kind of movements, to the rapidity and frequency with which they are accomplished, must be corrected without delay. There is no doubt that many a patient loses patience, gets discouraged at the slowness of improvement, and thus is apt to abandon the treatment. Continuous encouragement is essential on the part of the physician. The treatment is unquestionably slow, but it is certain in results in the majority of cases. Perseverance and enthusiasm in the method are two requisites indispensable for success.

TREATMENT OF FACIAL SPASM

In the majority of cases this affection, as we have seen, is due to an irritation of the peripheral trunk of the seventh nerve. Carrying a remedy directly to the nerve itself is the most appropriate mode of treatment. By analogy with the painful affection, which is the result of an irritation of a sensory trigeminal nerve and which is relieved by injection into the nerve, or in its vicinity, of alcohol as advocated by Schlösser, Baudoin and Lévy, Valude, Ostwalt and Dupuy-Dutemps, a similar injection into the seventh nerve for relief of facial spasm which is produced by an irritation of the facial nerve, gives sometimes satisfactory results.

CASE REPORTS

CASE 1.—*Patient.*—The first of my patients thus treated is a young woman (Figs. 1 and 3) who first came under my observation in July, 1910. For four or more years she suffered from spasmodic contractions of the left side of the face occurring a great many times a day. There was no pain. The condition made her very uncomfortable, besides the esthetic inconvenience which she experienced. The character of the spasm and its various features were described above. No special cause of the spasm, such as injury, could be traced. Her history is free from any other nervous affection and she always considered herself healthy. As the condition was typical of facial spasm and consequently due to a direct involvement of the facial nerve, I proposed to her the treatment with injection into the nerve of alcohol.

Treatment.—Accordingly, Sept. 21, 1910, 5 minims of 80 per cent. alcohol were injected with an ordinary hypodermic needle, directly into the stylomastoid foramen supposedly into the facial nerve. Seven such attempts failed to produce the desired facial palsy. This was an indication that the nerve itself was not reached. Only the eighth injection was completely successful. Immediately after the injection a facial palsy was noticeable. The paralysis was of the peripheral type, viz., the entire nerve was involved; the face was drawn to the right side and each individual muscle of the entire left side of the face was paralyzed. It was particularly seen when the patient attempted to wrinkle her forehead; the evidences of a typical Bell's palsy were present. Patient was unable to frown, to wrinkle her forehead, to masticate properly, as food would run out of her mouth on the left side, she could not blow, whistle, etc. Briefly, she suffered the same inconveniences as in ordinary facial palsy from any other origin. The spasm disappeared on the day of the successful injection and has not returned since then.

Course.—For a period of six weeks the facial palsy remained unaltered. I then began to use faradic electricity on the palsied muscles. At first the latter were stimulated only two or three times a week but later every day. Each sitting lasted but ten or fifteen minutes. Massage of the face was also added at a still later period. The first improvement of the facial paralysis was noticed about three months after the alcoholic injection. Since then the improvement kept on making rapid progress. After using electrical stimulation of the face for three months the recovery became complete. At present the recovery from the facial palsy is accomplished and at no time since the successful injection of alcohol has there been a return of spasmodic twitchings, which, prior to the treatment, had been in existence for a period of over four years. Patient is able to wrinkle her forehead, to eat without losing her food, to blow, to whistle, to smile, to close her left eye and there is no trace of disfigurement of the face. The sole abnormal phenomenon to be noticed is the involuntary associated movements of the orbicularis palpebrarum and zygomatic muscles. That is, all contractions of the orbicularis, reflex or voluntary, are accompanied by synchronous contractions of the zygomatic muscles.

The reason of the phenomenon lies probably in the fact that regeneration of some of the nerve fibers distributed in the orbicularis is defective and their stimulation is transmitted to the nerve fibers distributed in the zygomatic muscles. Associated movements is a common phenomenon observed in the course of recovery of facial paralysis. They may remain for months and years, as I have seen in two cases, or may eventually disappear. The latter probably corresponds to complete regeneration of the nerve fibers.

CASE 2.—*Patient.*—Man of 52, a neuropathic individual, developed a facial spasm on the right side of the face which persisted for two and a half years. (For details of the spasm see Fig. 1.)

Treatment.—Twelve attempts were made to inject alcohol into the right facial nerve at its exit from the stylomastoid foramen, but they were all in vain, as the surgeon could not strike the nerve. The twelfth injection was followed by a very slight deviation of the face toward the left, but this paresis lasted only about one hour. Curiously enough, after

this last attempt the patient was almost completely free from the spasm for a period of five months. Only occasionally could be observed a slight fascicular tremor in the vicinity of the outer angle of the right eye. Evidently none of the twelve injections reached the nerve, and the last was probably done in the close proximity of the nerve trunk, compressing slightly the nerve and producing a transient facial palsy. Nevertheless the cessation of spasm for five months is an indication of the beneficial effect of the alcohol being in contact with the nerve and inhibiting thus the irritation of the nerve. With the beginning of the sixth month a new attempt was made and this time the success was complete. The injection of 5 minims of 80 per cent. alcohol was made directly into the nerve and a facial palsy immediately followed.

Course.—In Figure 4 is seen the complete involvement of the entire right side of the face. The patient is seen in the act of raising and wrinkling his forehead with a total disability of the right musculus frontalis. Besides, he could not whistle, blow, masticate properly as food and liquids ran out of the right angle of his mouth. The spasms ceased entirely.

Fig. 3.—Facial palsy produced in a woman after eight injections with alcohol as a treatment for spasms (Case 1).

Fig. 4.—Facial palsy in a man after thirteen injections with alcohol in a treatment for spasm (Case 2).

There has been no return since the successful injection of alcohol. Similarly to the treatment in the first case, a course of electrical stimulation was instituted at the end of six weeks and by the end of three months complete disappearance of the palsy took place without recurrence of the spasm.

The treatment of facial spasm with injections of a few minims of alcohol is a very important addition to our therapeutic armamentarium. The affection, while not painful itself, is one of the most disturbing. Besides the esthetic consideration on account of the disfigurement, there are also great inconveniences. While the individual is eating, conversing, lecturing, he is suddenly seized with a drawing up of one-half of his face, which may last a minute or two, or else repeat itself incessantly for several minutes. Fatigue has a great influence over it. My second patient, who was a watchmaker, was obliged to give up his work in the afternoon, as being then somewhat tired, he suffered almost continuous twitching of his face; the closure of the eye during his work disturbed him considerably.

The operation is not a difficult one. It requires knowledge of topographic anatomy of the exit of the nerve from the stylomastoid foramen. As a point of departure can be taken the end of the mastoid process. The foramen is situated in front and inward of the process. When the patient lies on a table during the operation and his head is turned to one side, the hypodermic needle should be directed immediately beneath the mastoid process, first inward, toward the median line, and then slightly forward. As we have seen above, it is not an easy task to strike the nerve. It required in my two cases a great many injections before the nerve was caught. A facial palsy must follow immediately if the injection is successful. Consequently, if after an injection no deviation of the face is observed, there is a failure. The injection must be repeated until the paralysis is obtained. Five minims of 80 per cent. solution of alcohol is the amount required. Repeated injections of alcohol do no harm. In my first case seven and in the second case twelve injections showed no untoward symptoms, except a slight burning, which disappeared promptly, and a certain amount of tenderness which may last several days. No permanent damage to the tissues has been observed. In cases of bilateral facial spasm, such as Meige's has described, alcoholic injections may be tried on each facial nerve separately. That is, one nerve should be treated first; the facial palsy which follows must disappear completely before attempts are made to inject alcohol into the other nerve. In cases of facial spasm associated with lesions in mesencephalon, similar treatment may be applied, as besides the facial paralysis (which eventually disappears) there are no permanent injuries to the nerve.

V. 58
1912

Only a genuine facial spasm can be treated with alcoholic injections, as the irritating influence is found in the nerve itself. No other convulsive movement of the face can derive any benefit from it. Tic, being associated with and somewhat dependent on the psychic status of the patient, cannot *a priori* derive any benefit from this treatment. As an example, I may mention a patient with facial tic of several years' duration in whom I produced a facial palsy which lasted three months. During that time occasional twitch of some of the paralyzed muscles could be noticed which of course does not occur in palsies produced in cases of facial spasm. Moreover, as soon as the facial paralysis disappeared, the tic movements returned with all their intensity. A rigorous differential diagnosis between facial spasm and tic must be established before the above-mentioned treatment is undertaken.

As to the intimate action of alcohol on the nerve or on its center, nothing definite can be said at present until experimental investigations will come to our aid.

At the time of writing these notes the patients are free from spasm; thirteen months in the first, nine months in the second case having elapsed since the successful injections of alcohol.

1430 Pine Street.

THE PREVENTION OF POSTOPERATIVE GYNECOLOGIC PSYCHOSES

HERBERT P. COLE, M.D.
Lecturer in Gynecology, Medical Department of the University of Alabama
MOBILE, ALA.

Postoperative nervous phenomena are not infrequent complications in gynecologic cases. The severity of the psychoses has called forth an occasional commentary case-report, though the subject in general has received little or no attention from the abler writers on gynecologic problems. The well-known tendency to derangement of the nervous mechanism in gynecologic cases naturally predisposes to postoperative psychic sequelæ. Insomnia, hysteria, acute and chronic melancholia, neurasthenia and suicidal mania are a few of the unfortunate complications that may arise following operation on the female pelvis. Permanency of cure in gynecologic cases is frequently determined by the absence of postoperative psychic sequelæ.

Frequently, of course, the nature of the pelvic pathologic conditions will obviate any possibility of operative relief of associated nervous lesions, and the nature of the gynecologic disease may portend continued or exacerbated manifestation of the psychic disturbances. I believe, however, that in a great majority of cases, the mild or even severe derangements may be prevented or in large part allayed by more careful attention to this feature in the management of gynecologic cases.

There lies in the foreground of our minds knowledge gained by experience that we unconsciously apply to the management of our female cases with the object in view of making for the peace of mind of both patient and operator, both through the period of hospital residence and through after-life. This preventive treatment is naturally instituted with the first meeting or correspondence of patient and operator. Tactful management of correspondence, consultation, anamnesis and examination, all conducted in a spirit of sympathy and assurance to the patient, frequently gains the confidence of the patient to such an extent that serious nervous outbreaks are obviated from the beginning.

A judicious selection of time and place for the operation, the employment of a tactful nurse, a cool, quiet room, a short and comfortable preoperative hospital residence are all factors in precluding a stormy convalescence. The employment of a tactful, reassuring anesthetist in quiet surroundings carries the patient into the operation in proper mental condition for a short and peaceful postoperative experience. A short visit from the operator shortly after the patient regains consciousness, a short visit from one or two tactful relatives on the first day usually suffice to keep the patient in a normal mental condition.

Careful attention to the prevention or alleviation of postoperative pain, permitting free motion of limbs, latitude in change of posture, alcohol rubs or at most a mild sedative, will usually eliminate insomnia and thus the inception of far more serious nervous sequelæ.

Elimination of morphin therapy and the early and frequent use of the rectal tube, together with early evacuation of the bowels remove tympanites as a serious etiologic factor of psychic complications.

The substitution of a soft diet within a day or two after operation and a rapid return to the establishment of the patient's normal preoperative diet is not only excellent physiologic therapy but undoubtedly a great factor in disabusing the patient's mind of the old ideas of invalidism usually conveyed by the liquid "foodless food" régime of former days.

The early institution of the back-rest and removal to a chair within a few days after operation continue the dissipation of the "invalid idea." An early removal to the home not only establishes a shorter and more comfortable convalescence but removes the patient from contaminating associations with other female patients whose *idée fixe* is a devilish desire to impregnate the minds of all patients newly operated on with the hopelessness of their ultimate cure.

In conclusion, I feel that the percentage of patients in whom we effect an ultimate and permanent cure depends largely on personal study of the individual and constant endeavor to so conduct the case as to obviate the pathologic psychic element in the convalescence.

202 Conti Street.

A CASE OF PHENOL (CARBOLIC ACID) GANGRENE

F. BUCKMASTER, M.D.
EFFINGHAM, ILL.

Gangrene of the toes is occasionally caused by the application of weak solutions of phenol. The infrequency of this form of gangrene on other parts of the body is the reason for reporting the following case:

The patient, Mr. J. H. McC., aged 66, is a carriage manufacturer and a resident of St. Louis. Father died of cancer at 67; mother in confinement at 38. There is no other cancer history in the family. Patient is a very healthy-looking man, of good habits, looking much younger than age given, and weighs about 175 pounds. He has had eczema several times, but otherwise has never been sick.

Present trouble: About Aug. 1, 1911, while alighting from a railway train he slightly bruised and abraded the anterior surface of his right leg, just below the knee. Thinking it amounted to nothing at the time, he cleansed it with hydrogen peroxid and placed sterile gauze over the part. About two days later, when he took the dressing off, he asked his druggist to give him something to apply over the surface, as there was still a little tenderness in the part. The druggist gave him what he thought was the ordinary phenolized petrolatum of

the drug shop, kept in stock by all of them. After applying this preparation a few times, the tissues broke down into a progressively enlarging gangrenous ulcer, which continued to get larger and deeper, in spite of the care which he gave it. He came for medical attention about it two weeks after the receipt of the bruise.

At that time there was a deep, ragged, gangrenous ulcer, about 2 inches below the patella on the right leg, very much larger than a dollar, with a wide zone of diffusing redness and edema surrounding it; otherwise the patient's condition, including urine, was negative. This ulcer was cleaned out and cared for, for about four weeks, when it was almost healed. He later reported that it was completely healed in one week after he left here. Then it remained healed for about four weeks, or until the middle of October. About that time, while the patient was in Oklahoma on business, he noticed the site of the old ulcer gradually becoming numb, more and more for two or three days, when the part became slightly blistered, leaving a dead-looking sore, as he described it, as large as a dollar, at the site of the old ulcer. He again kept this carefully cleansed with hydrogen peroxid and tincture of iodin and dressed with sterile gauze, but it did no good.

The tincture of iodin, when applied, caused no pain of any kind; the patient came back on November 2, immediately on his return to St. Louis from Oklahoma. At this time the ulcer was dark, dry, shallow, indurated, non-sensitive and painless. This was non-inflammatory and came without known cause. In other words, it was to all appearances suspiciously of a malignant tendency. There were no glandular enlargements with the second ulcer. Urine and general condition was still negative. This ulcer was now given *x*-ray treatment every other day, and after the second treatment, a decided improvement was observed. At the end of two weeks of *x*-ray treatment the ulcer was again almost entirely healed, when the patient returned again to his home. This patient's condition will be carefully watched for many months for further evidences of a possibly malignant condition of the part.

A similar case of gangrene from phenolized ointment was reported recently by Dr. Brown,[1] of Decatur.

HEMIATROPHY OF THE TONGUE WITH DEFECTIVE SPEECH *

E. W. SCRIPTURE, PH.D., M.D.
Associate in Psychiatry at Columbia University
NEW YORK

Patient.—A girl, J. M., aged 15, was brought to the Vanderbilt Clinic on account of her defective speech. There was also a suspicion that her intelligence was not fully normal. The patient's birth was normal. She was the third of five children, all the others being normal. At 6 weeks old she had had whooping-cough, with two severe spasms, lasting for five minutes. She had had abscesses three times on the left side of her neck at 1½, 3 and 10 years of age.

Examination.—Her speech was very indistinct, owing to her inability to enunciate properly the sounds of *t, d, s, sh*. Her facial expression was dull and sad. She was unresponsive and very timid. There was marked atrophy of the right side of the tongue with fibrillary twitchings. On protrusion the tongue deviated to the right, as shown in the illustration. The movements of the tongue were clumsy. The right side of the soft palate failed to rise as far as the left side. There was no laryngeal defect. The girl could not whistle; in trying to blow out a flame she failed to pout her lips; there was thus apparently some weakness of the orbicularis oris. It was impossible to decide whether there was any weakness of the muscles of the cheeks. There also seemed to be an indication of weakness of the right sternocleidomastoid, but the point could not be made certain. The face was slightly asymmetrical, but it could not be said that the right side showed any atrophy. The reflexes were all normal and there were no nervous defects, except those noted. An examination of the girl's intelligence by the Binet tests showed the intelligence proper for her age. The conclusion was certain that she had no intellectual defect. The apparent dulness and sadness can be explained as the results of the constant reproof and shame to which her defective speech subjected her. The inaccuracy in producing the sounds of *t, d, s, sh* was evidently due to the atrophy. Usually a weakness of the muscles of the tongue does not produce a marked defect in speech, because the person can generally manage to use his tongue well enough to produce normal sounds. This patient had failed to make the necessary compensations, possibly from timidity or some similar cause.

Treatment and Course.—The diagnosis of the speech defect was that of organic lisping, that is, incorrect enunciation due to defects in the speech organs. The treatment consisted in appropriate exercises. The patient in a few weeks progressed rapidly toward a complete cure of her speech trouble.

The cause of the hemiatrophy cannot be readily given. Weakness of the lips is often observed in connection

Hemiatrophy of tongue in patient with defective speech.

with atrophy of the tongue. This may be a case of congenital defect of the nucleus of the hypoglossus, which supplies also some of the fibers of the orbicularis oris (Gowers[1]). It may be due to progressive bulbar palsy which up to the present had affected only the hypoglossus. Against this is the fact that the speech trouble had been noticed since early childhood and had not become worse. Another possibility is an anterior poliomyelitis; still another is that of encephalitis.

130 West Seventieth Street.

1. Gowers: Diseases of the Nervous System, ii, 50.

1. Brown, Everett J.: THE JOURNAL A. M. A., Nov. 11, 1911, p. 1613.

* Address before the New York Neurological Society.

Drug Dupes.—A cardinal rule in prescribing should be, never prescribe a preparation of whose exact composition we are ignorant. Yet how few of us live up to such a rule. How often are we the dupes of the drug manufacturers in this respect; we accept what their preparations are said to contain without anything but faith in the honesty of the manufacturer to support our belief.—Stephen F Hale in the *Mask*.

THE TREATMENT OF WOUNDS, WITH REFERENCE TO TETANUS PROPHYLAXIS *

OSCAR BERGHAUSEN, B.A., M.D.
AND
CHARLES E. HOWARD, M.D.
Receiving Physician at the Cincinnati Hospital
CINCINNATI

In June, 1910, the late Dr. N. P. Dandridge proposed the systematic handling of all wounds, punctured, penetrating or lacerated, with the aim of ascertaining the best methods of treating such cases at a large general hospital, particularly with reference to tetanus prophylaxis. As is well known, to avoid the development of tetanus we must begin by treating, in a thorough surgical manner, the wound received. The use of antitetanic serum as a prophylactic agent was resorted to in a large series of cases, in order to test its value.

The following list of instructions were placed in each surgical ward:

The interns will please carry out the instructions mentioned below for the following classes of cases.

1. All perforating, penetrating or lacerating wounds contaminated directly by soil or manure, especially those contracted in the streets or about stables.

2. All blank-cartridge and giant-cracker perforating and lacerating wounds.

INSTRUCTIONS

1. In all cases above mentioned remove the clothing and foreign material about the wound.

2. Cleanse the surrounding parts with green soap, alcohol, ether and sterile water.

3. Remove with sterile forceps any foreign material lying superficially in the wound.

4. Cleanse the wound with 5 per cent. phenol (carbolic acid)-0.5 per cent. hydrochloric acid solution.

5. Enlarge the opening by free incision if necessary to thoroughly cleanse the wound, or for the removal of foreign substance.

6. Use a general anesthetic whenever indicated.

7. Pack the wound lightly with gauze soaked in the phenol-hydrochloric acid solution, and dress. Change the dressings daily.

8. Immediately after dressing the wound on the first day give 1,500 units of antitetanic serum subcutaneously. This serum can be obtained at the laboratory.

9. A careful record must be kept and sent to the laboratory when the patient is discharged.

10. In the case of doubt or on the appearance of symptoms resembling tetanus, notify me [Berghausen] at once.

Heretofore such injuries were opened, cleaned and treated with strong phenol solution. The object of using the hydrochloric-phenol mixture as recommended in the text-books was to test its efficiency, since it is attended by less necrosis of tissue. Experience has shown us that treatment of all wounds after the above fashion was sufficient. Particular care was taken to clean out all wounds thoroughly, opening by incision if necessary, to remove all foreign material. Particularly is this necessary in blank-cartridge wounds when wads may have entered. In such cases, in two instances, wads were removed on successive days by different interns, each one thinking that he had removed the last wad. In these cases a general anesthetic may become necessary.

To ascertain how many wads were present in each blank cartridge, four different specimens were bought and examined. In each one two wads were found, but these were found to be rather loosely made and could easily be torn into fragments.

* From the Serological Department, Cincinnati Hospital.

ANTITETANIC SERUM AS A PROPHYLACTIC MEASURE

Owing to the experience of others, we have used only one injection of 1,500 units, usually given in that part of the anatomy nearest the wound. We repeated the injection in three cases in which suppuration persisted. In this connection we wish to quote the results of Sir D. Semple,[1] who says:

Many people in apparently good health harbor spores of tetanus in healed wounds or in the intestinal tract, and that hidden away in the tissues the spores remain alive and retain their virulence, but do not grow into toxin-producing bacilli. . . . The leukocytes do not always destroy the spores, but when a local suppuration has ceased they may be able to wander away with the spores still in them. . . . Spore-carriers are in danger of suffering from tetanus (a) on the occurrence of great fatigue or exposure to heat or cold, which diminish their resistance; (b) when the site where the spores are lodged becomes converted into a medium, which from being anaerobic and from a failure of phagocytosis, is favorable for the growth of the spores into toxin-producing bacilli; and (c) when a focus of dead tissue forms in a part of the body at a distance from the site where the spores are lodged.

Quinin given hypodermatically may produce a local tissue necrosis; soluble non-irritating substances do not. Semple further asserts that from 10 to 15 c.c. of antitetanic serum renders a patient passively immune for a period of from two to three weeks, and has found it a valuable prophylactic agent when using quinin hypodermatically.

SERUM REACTIONS

These were noted in several cases and were marked by local redness, swelling, urticaria-like eruptions and fever. Owing to patients not reporting as directed, we were unable to obtain complete statistics in this regard. With the aim of preventing such symptoms or of ameliorating them when once developed, atropin sulphate (gr. 1/100-1/120 three times a day, in children less) was given hypodermatically, particularly when numerous injections of serum were made in cases of developed tetanus. We have found that this drug possesses undoubted value in preventing such symptoms. Itching, redness and urticarial eruptions frequently disappeared when atropin was given. We therefore adopted this measure as a routine before all repeated injections of serum. At times such eruptions will appear following the use of atropin sulphate, but never to a very marked degree.

TABLE 1.—CASES IN WHICH SERUM WAS USED PROPHYLACTICALLY; GOOD RESULTS

Character of Injury	Total No. of Cases	Serum Used, in Units
Punctured wounds (mostly made by nails)	72	1500
Contused and lacerated	4	1500
Cannon-cracker wounds	2	1500
Gun-shot wounds	6	1500
Blank-cartridge wounds	7	1500
Powder burns	5	1500
	96	

In Table 1 will be found a list of cases of patients treated at the hospital with the aim of preventing tetanus after the method described in the foregoing.

Not one case of tetanus developed in the above series of patients.

1. Semple, Sir D.: The Relation of Tetanus to the Hypodermic or Intramuscular Injection of Quinin, Paludism, Simla, January 1911. No. 2, p. 32.

In Table 2 will be found those cases in which serum was not used as a prophylactic measure, and in which the local treatment of the wound was good. Of this list not one developed tetanus.

TABLE 2.—CASES IN WHICH SERUM WAS NOT USED PROPHYLACTICALLY; GOOD RESULTS

Character of Injury	No. Cases	Result
Punctured wound—nail	3	Good
Blank-cartridge	3	Good
	6	

In Table 3 will be found those cases in which serum was not used as a prophylactic measure, and which later developed tetanus.

These patients were first seen by us after tetanus had developed, excepting cases 1 and 6. Case 7 occurred in the private practice of Dr. George Krieger of Madisonville, by whom we were consulted and to whom we are indebted. Case 5 occurred in the service of Dr. Casper Hegner at the City Hospital.

Two cases in which serum was used prophylactically, the one caused by a cannon-cracker wound of the neck and followed by extreme cellulitis before admission, the other, caused by stepping on a nail and followed by cellulitis before admission, resulted in sudden death. No autopsy could be secured, but death was evidently due to an embolus, no symptoms of tetanus developing and no anaphylactic phenomena.

TABLE 3.—CASES IN WHICH SERUM WAS NOT USED PROPHYLACTICALLY AND TETANUS DEVELOPED

Cases	Character of Injury	Incubation Period (days)	Early Treatment of Wounds*	Serum (In units) Intramuscularly (Tuberculosis serum)	Phenol (Carbolic Acid) Injections in per cent.	Albuminuria†	Duration of Illness	Result
1	Multiple puncture wound made by shot	7	—	0	0	—	14 hours	Death.
2	Lacerated wound	4	—	20,000	0.24	+	5 days	Death.
3	Punctured wound (nail)	5	—	0	0.14	+	30 hours	Death.
4	Punctured wound (pick-ax)	8	—	3,000	0	—	4 days	Death.
5	Cut by a barbed wire	14	—	50,000	0	—	14 days	Recovery.
6	Crushed foot	10	+	27,000	0	—	2 days	Death.
7	Cut by a scythe	8	0	27,000	0	—	About 2 weeks	Recovery.
8	Compound fracture; infected	6	—	27,000	0	?	2 days	Death.

* In this column + means "good," — means "poor" and 0 means "none." † In this column + means "present," — "absent" and 0 "doubtful."

RESULTS WITH AND WITHOUT PROPHYLACTIC SERUM TREATMENT

In the ninety-six cases properly treated locally and by the prophylactic administration of antitetanic serum, not one patient developed tetanus.

In the fourteen cases (Tables 2 and 3) treated without the prophylactic administration of antitetanic serum, eight patients developed tetanus of whom six died.

In the cases (only six, however) properly treated locally and without the prophylactic administration of antitetanic serum, not one patient developed tetanus.

Patient 6 (Table 3) was thoroughly treated locally, but did not receive the prophylactic serum injection and succumbed to tetanus.

We had the opportunity of assisting in the treatment of eight patients with developed tetanus during the past fifteen months, and feel that the information gained is of some value. The usual methods of treatment were employed, antitetanic serum and phenol subcutaneous injections (2 per cent.) included. Briefly stated, our observations are as follows:

Although the cases with a short incubation period offer the least hope, such cases are not necessarily fatal. Case 7 was seen by Dr. Krieger, the first physician consulted in the case, two days after symptoms of tetanus had developed, and yet the manifest symptoms disappeared after one week's careful treatment.

If antitetanic serum is to be used at all, large doses must be employed, although enormous doses, as recommended by those interested in its sale, were not used by us.

Atropin sulphate has some value in controlling serum reactions and is deserving of further trial.

The subcutaneous administration of phenol, 2 per cent. solution, is followed by an early appearance of albumin in the urine. This possibility of damaging the kidneys must be taken into consideration when the injections are used. In the future we shall follow such injections by the rectal administration of a hypertonic neutral salt solution to limit, if possible, this damage to the kidneys, in accordance with the results obtained in experimental nephritis, by Prof. Martin H. Fischer, of this city.

We feel, after a careful study of such injuries as listed in the foregoing, that no wound of such a nature should be treated lightly by any physician. By carefully cleansing each wound, using a general anesthetic if necessary to remove all foreign material, and employing a diluted antiseptic to prevent sepsis, and then treating each one as an open wound, the physician has done much to prevent tetanus. By employing one immunizing dose of 1,500 units of antitetanic serum, to be repeated only when suppuration has not ceased after a week, he can practically assure the patient perfect safety from tetanus.

19 West Seventh Street.

Public Health.—Public health is the foundation on which rests the happiness of the people and the power of the state. Take the most beautiful kingdom, give it intelligent and laborious citizens, prosperous manufacturers, productive agriculture; let arts flourish, let architects cover the land with temples and palaces; in order to defend all these riches, have first-rate weapons, fleets or torpedo boats—if the population remains stationary, if it decreases yearly in vigor and stature, the nation must perish. And that is why I consider that the first duty of a statesman is the care of public health.—Disraeli.

ADIPOSIS PITUITARY SYNDROME OF LANNOIS WITH NARCOLEPTIC FITS, BUT WITHOUT GENITO-URINARY SYMPTOMS

PRELIMINARY REPORT

TOM C. WILLIAMS, M.B., C.M. (EDIN.)
AND
JOHN DUNLOP, M.D.
WASHINGTON D. C.

History.—After suffering for a year with vague malaise and headache, a sales-girl of 25 years had for four months fattened enormously, so that her weight increased from 141 to 184 pounds. After seeking advice from various sources without benefit, she consulted Dr. Dunlop, an orthopedist, for she believed that she had sciatica, because of the heavy pain in her back and the dragging weight and tenderness of her legs. Headaches of a dull and heavy type interfered with her pleasure and interest in life, and produced a marked loss of memory and absence of mind. Now and then, indeed, she would fall suddenly fast asleep, even falling over, utterly unable to resist the torpor which seized her. Sometimes in those attacks, she spoke absurdly and even sang. It was this behavior which led to the consultation with me. Vomiting was rare and there was no true vertigo. Now and then the vision dimmed suddenly, and the lines she read would blur. The headache was said to be deep and low in the middle of the head, and felt sometimes like a bursting.

Examination.—The organs were intact; there was great hypertrophy of the body fat which was tender on pressure, but of none of the bones or the mucous tissues. The increase of size was asymmetrical without preponderance on either side. Thus the left thigh measured 28½ inches, the right 28¼; the left knee 16 inches, the right 17⅛, and the left ankle 9¾, the right 9 inches, etc. The veins of the thighs were congested; so was the conjunctiva. The *x*-rays showed a deepening of the sella turcica. We diagnosed a neoplasm in or around the pituitary body, because of the deep headaches, the heaviness and sleepiness, the hypertrophy of the fatty tissues, and the changes in the visual field.

Treatment.—The treatment followed that of Béclerc and Jaugeas, consisting of exposure of the pituitary region for about ten minutes every week to Röntgen rays from four different points of the temporal region. The narcolepsy at once ceased, the headaches were diminished, the reflexes became less active and the visual field improved. In spite of some interruption to treatment, the patient was well some six months later, though the weight had not diminished with a restricted diet. We now intend to administer thyroid gland in the hope of increasing the metabolism.

1758 K Street N. W.—1309 Connecticut Avenue.

HEMOPHILIC BLEEDING CHECKED BY FOREIGN BLOOD

J. H. SAYER, M.D
COZAD, NEB.

Patient.—A boy, aged 13, of Danish parentage, with frequent attacks of rheumatism during the last few years. He of a hemophiliac and gives the history of several hemorrhages treated by physicians and dentists, with no complete control of hemorrhage in less than fifteen days. One of the worst was from the tongue, and was finally controlled by actual cautery after two weeks of bleeding. Two days before my visit, the boy had been struck above the right eyebrow by a pump handle. The extravasated blood gravitated to the upper eyelid and formed a tumescence which projected at least 1 inch from the forehead. This burst at school and I was called twenty-four hours later.

I found projecting from the eyebrow a hollow cone formed of blood which had slowly coagulated, from the end of which blood was dropping at the rate of one drop per second.

Treatment and Result.—I removed the cone, cleansed the parts, and found an opening in the skin, three-eighths of an inch long, from which the blood ran freely. I applied in succession hot compresses, ice, epinephrin, iron, caustics and collodion dressings following pressure, none of which had any effect for over five minutes at a time. I then determined to try the following experiment: I cleansed the wound thoroughly and had a hot compress applied with considerable pressure. I then made an incision in the third finger of my left hand, under sterile conditions, and removing the compress, allowed my blood to drop on the wound. A clot formed immediately and not one drop of blood again escaped. After assuring myself that the effect was not temporary, I applied a light dressing and left the patient.

Thirty-six hours later the patient, in his sleep, tore away the dressing and reopened the wound. I was then called and found the hemorrhage as profuse as in the beginning. I again used my blood with the same instantaneous result. I then made a Gifford eye-shield, which I removed three days later, and found the wound completely closed.

This procedure may not be a new one, but it was so to me, and may be of interest to those who are dealing with this class of cases.

RECURRING ADENOIDS IN CHILDREN

LOUIS FISCHER, M.D.
Visiting Physician to the Willard Parker Hospital
NEW YORK

The recurrence of adenoid vegetations after thorough curettage of the rhinopharynx suggests a diseased soil. Why should vegetations recur in some cases and not in others? The neuropathic child in which improper respiration and imperfect oxygenation of the lungs are factors invites reinfection by reason of a tendency to take cold because of subnormal conditions. Imperfect metabolism, especially the metabolism of fat and proteid, will give a deficient structure, which deficiency invites bacterial invasion. A weakened structure will permit the entrance of pathogenic bacteria, hence catarrhal or suppurative manifestations result therefrom. If structural weakness exists and the body is not given the proper food element, then restoratives will be demanded.

When such precautions are neglected after the removal of adenoids, we are not surprised to find a recurring adenoid vegetation. Occasionally we run across children with recurring adenoids, despite the fact that they have been given proper restorative treatment. If no organic lesion is found and a negative history as to syphilis is elicited, then a blood examination should be made to exclude the suspicion of a latent syphilitic infection. It is in such cases that a Wassermann reaction will be appreciated. We must not be satisfied with a negative clinical history regarding syphilis, but must confirm our suspicion of the presence of syphilis by a positive Wassermann reaction. The importance of a positive diagnosis of syphilis will be apparent because a syphilitic child requires treatment. The absence of specific treatment means the growth of the diseased structure with its deficient nutrition.

The coexistence of syphilis and adenoids suggests cause and effect. The frequent coryza in syphilitic infants is well known. We also know that adenoid vegetations *per se* discharge through the nose and throat sufficient to suggest a rhinitis, and this discharge owing to its local irritating properties gives rise to excoriation and results in what is commonly termed artificial eczema. As a rule, we find the cervical glands sufficiently enlarged to become palpable. The general appear-

ance of the skin is sallow and suggests anemia. Eruptions are by no means rare and should be looked for. It is therefore a mistake to presuppose, because a given child has adenoid vegetations, that this condition is due only to local manifestations, and that the only course to pursue is the curettage of the rhinopharynx.

The examination of the patient should consist in looking for syphilids in addition to palpating the liver and spleen. The family history should be carefully inquired into. Recurring adenoids are the source of a great deal of criticism inasmuch as the skill of the previous physician will be questioned.

It is useless to remove by curettage a mass of adenoid vegetations which may be due to or have an underlying foundation of syphilis. Specific treatment also is indicated and must be employed.

162 West Eighty-Seventh Street.

AIMS, PURPOSES AND PROBLEMS OF THE STATE BOARD OF MEDICAL EXAMINERS

BENJAMIN K. HAYS, M.D.
Secretary, State Board of Medical Examiners
OXFORD, N. C.

V. 58
1912

In round numbers there may be said to be two thousand doctors in North Carolina. The average number granted license every year is nearly one hundred. There is, therefore, nearly 5 per cent. of new blood introduced into the profession every year.

The standard of the North Carolina Board of Medical Examiners is somewhat higher than that of some of her neighboring states. On the other hand, many of the northern states have a standard higher than ours. The average number of failures before the North Carolina board (about 18 per cent.) is less than the average of all the states (18 to 20 per cent.).

The Board of Medical Examiners of the State of North Carolina was created by a special act of the legislature in 1859. In point of age it comes third among the state boards of the nation. The Maryland Board was created in 1799, and that of the District of Columbia in 1838. In 1885 it became a misdemeanor to begin the practice of medicine in North Carolina without a license. In 1899 a law was passed forbidding non-graduates to appear before the board. In 1907 came the reciprocity clause, and in 1909 the "limited license" act. Under the last-named, non-graduates may be licensed to practice in the sparsely settled mountain districts.

DIFFICULTIES WITH WHICH THE STATE BOARD HAS TO CONTEND

The responsibility placed on an examining board is enormous. Many of the applicants coming before the board are poor. For four years, probably, they have struggled to keep themselves at college, or they may have borrowed money and their only hope of repaying this is by the practice of their chosen profession. Again, applicants may be married, may have families to support, or their resources may have been exhausted. For such applicants, the board knows that rejection is a serious matter. But sympathy with individual applicants must not result in a lowering of standards.

Again, some of the applicants have strong and influential friends, both in the profession and out of it, who may urge the board to use more leniency. The board may have to face the tears of the wife and the resentment of the friends of a certain applicant whom they have rejected. Again, some who are rejected are sure to insist that partiality or prejudice has been shown and it may be difficult to convince them that the papers were graded without any knowledge of the names of the writers. Such applicants are often ready to believe that the intervention of some influential friend would have secured them license.

Again, many of the applicants are the sons, pupils or special friends of physicians. The rejection of such applicants may not only create enemies for the board, but too frequently their fathers in medicine are led to believe that injustice has been done. Even threats may be used. Twice during the past year in North Carolina, members of the board have been told by physicians that if certain men in whom they were interested were not granted license an appeal would be made to the legislature for their relief. One applicant threatened the board with the courts, while a great many undertake to appeal to the personal sympathy of the members. Such are some of the conditions and influences which tend to prevent the board of medical examiners from enforcing the medical practice act.

THE BOARD'S SOLE RESPONSIBILITY IS TO THE PUBLIC

When a man is granted license to practice medicine he is given a certificate of proficiency. That man goes at once to his chosen field of operation. Unlike the young lawyer, he does not have many years to wait for important cases to come into his hands. His first calls are emergency calls—a leading citizen is shot, a prominent woman has puerperal convulsions or an infant is burned. Such are the calls which a young doctor receives during his novitiate. On his skill and knowledge may depend the life of the patient. To stamp the seal of approval on an ignorant man means the hurrying of many innocent victims to the grave. To license such a man simply because he is poor or in need, means that he will sell knowledge that he does not possess, and that every dollar which passes into his hands has been fraudulently obtained from people whose condition is far more pitiable than his.

The board of examiners undertakes to ascertain an applicant's competency to be entrusted with the care of the sick, and where license is refused it is because the applicant is believed to be unfit for such a responsibility.

To grant license to incompetent men, moreover, tends to lower the standards of the medical profession. The Medical Society of North Carolina is a body, to be a member of which any man may justly feel proud. There is no demand on the part of the public for more physicians, but there is a demand within this society that we from year to year become better physicians. There is a demand that the young graduate of medicine be better prepared to practice than we were at his age. This demand on the part of the medical profession is not only reasonable, but is necessary for the self-respect of our profession. Thousands of competent men are being turned out from our high-class medical schools every year. They are looking for unoccupied fields. Many of them have been born and bred in this state, and because of their superior training they will make highly desirable citizens. There is also a host of poorly prepared men who have attended inferior schools, because the latter were cheap, required no preliminary education and rejected very few applicants for graduation. Between the graduates of these inferior schools and an unsuspecting public stands the board of medical examiners.

Is it desirable that the board turn loose a horde of incompetents on the state while her intelligent sons are seeking homes in other parts of the nation?

QUACKS AND CHARLATANS

Again the medical profession must hold itself aloof from the increasing number of quacks and charlatans, as well as from the many medical cults with which the land is infested. How absurd are the claims made by such cults of a special knowledge of disease obtained by a six-weeks' course of study! And marvelous advantages are always proclaimed by the promulgators of the latest cult, the followers of which frequently meet with an ephemeral success.

But let us not be discouraged. A medical diploma from a reputable school and a certificate from a reputable board mean something beyond the reach of these people, and they know it. Let us not bridge the gulf which divides us from these people by lowering our own standards.

NEED FOR HIGH STANDARDS

We have our limitations. No man feels his own ignorance when facing the great mysteries of life and death more than the so-called learned physician. The fight with death must ever be a losing one, and when the monster claims his victims our vaunted skill is as nothing, and our boasted learning but a bitter wail. And yet, ours is the profession which guards the interests of civilization and makes modern progress possible, while the various medical cults are as camp followers who prey on the wounded and loot the dead.

I repeat, therefore, that both our duty to the public and our duty to ourselves demand that we keep our standards high. As for the North Carolina board, it is quite seldom that a graduate from a reputable medical school fails in his license examination, but the incompetent should know beforehand that they cannot obtain license in this state.

THE POWER AND DUTIES OF THE BOARD

It will be seen, therefore, that the members of the board of medical examiners are merely public servants. The power which the board possesses is granted ostensibly by the laws of the state. Under our form of government the only real law is public opinion. The only people who have any opinion about medical laws—because they are the only ones who think about them—are physicians. Therefore, whatever power the board of medical examiners may possess is derived from the moral support of the medical profession. No one else is in a position to realize the seriousness of a non-compliance with the medical practice act. No illegal practitioner in any town or county will stand an examination if the physicians endorse him as he is.

If the medical profession should stand up and say, "We will have no board of medical examiners," undoubtedly the board of medical examiners would cease to exist. If that radical action were taken, straightway there would flock into every nook and corner of this state a host of medical parasites whose chief stock in trade would be the ignorance and credulity of the people on whom they practiced. The board of medical examiners is the barrier which is defending the public against them.

The board, therefore, is on picket duty. It constitutes the firing line and many are the problems it has to face. It is for the board to consider what preliminary education shall be required of the applicant; what medical schools shall be accounted as satisfactory; what allowance shall be made to applicants who have had a given number of years in practice; how the examination shall be made practical; to what extent reciprocity shall be established with other states; under what conditions the board shall consider the rescinding of a medical license; and how certain much-needed legislation can be secured.

NATION-WIDE PROBLEMS

The North Carolina board is not alone in facing these problems. They confront every state board of medical examiners in the country. There is a National Confederation of State Medical Examining Boards and there is a Council on Medical Education. These bodies are devoted to the problems of medical education and of medical examinations. Among their members may be found some of the ablest men in America, and they have done much to simplify and unify the work of medical colleges and examining boards. The members of the present examining board in North Carolina who have attended the Conference of the Council on Medical Education have returned to the state filled with enthusiasm, and with many practical suggestions for their work. Every state board should have at least one delegate at each annual meeting of the Council on Medical Education.

PRELIMINARY EDUCATION

Most states now require all applicants to have had some preliminary education, and every reputable medical school requires it. Twenty-eight medical schools in this country require students to have completed at least two years of collegiate work before entering the medical course. Thirteen other medical schools require one year of collegiate work for admission. Furthermore, the licensing boards of nine states now demand one or two years of collegiate work as their minimum requirement of preliminary education. Some states could not enter on reciprocal relations with North Carolina because we have no preliminary educational requirement. Repeated efforts have been made to insert the preliminary educational requirement in our law, but it has always been defeated under the mistaken idea that it is a kindness to the poor boy to permit him to enter on a profession for which he is not qualified.

PRACTICAL EXAMINATIONS

There has been a growing feeling in recent years that a written examination does not indicate an applicant's ability to practice medicine. It is felt that each examiner should give the applicant some practical work, and that the general intelligence, proficiency and personal equation of the applicant be taken into consideration. To meet this demand the North Carolina board employs the following methods:

1. The obstetric manikin has been in use many years. In addition to the oral and written work, it provides a satisfactory test of the applicant's knowledge of obstetrics.

2. In the practice of medicine and in surgery a few chronic cases may be found and employed as clinical material. But a healthy subject is more satisfactory. The method of making a physical examination and the pointing out of surgical landmarks quickly reveal the applicant's knowledge of these subjects.

3. In surgery an additional test is employed by requiring applicants to examine surgical instruments, tell their names and show how they are used.

4. The examination in histology is supplemented by use of the microscope; pathologic and bacteriologic specimens are also presented for microscopic examination.

5. In chemistry each applicant makes a practical urinary test and is questioned about other tests.

6. In materia medica the identification of drugs with a few remarks about the same has long been in vogue. With the addition of such practical work the written examinations are made shorter.

RECIPROCITY

The most difficult problem with which the state boards are now contending is that of reciprocity. In North Carolina the law is that the "board of medical examiners shall at their discretion issue a license" by reciprocity. On first thought it would seem wise for a given state to extend to licentiates of neighboring states the privilege of entering on the practice of medicine within her boundaries without an examination. If a man is qualified to practice medicine in one state, why is he not in another? Further consideration, however, shows many reasons why it is not well to thus throw open the doors to every comer who may hold a state license. Among these reasons the following will be considered:

1. With a few state boards the examinations are merely a matter of form. If reciprocal relations were established with these states, many applicants for the North Carolina license would go to these states, take the examination and then demand license in North Carolina by reciprocity.

2. Some states are the homes of very inferior schools. The graduates from these schools have easy sailing in their home state—else they could not exist—but great difficulty in obtaining license in other states. Reciprocal relations with such a state would mean that in many instances the graduates of these schools wishing to locate in North Carolina would after graduation take their examination in the state where the school is located and then apply for reciprocal license in North Carolina.

3. As a rule it is not the successful physician who moves from one state to another, but the man who has failed. Unconditional reciprocity with a neighboring state would be an invitation to every man who has made a failure in his home state to move into North Carolina.

4. There are not less than ten thousand itinerant quacks, moving from town to town, in this country. These men frequently have license in some of the states. There are a few of them in every state. We have them in North Carolina, and I regret to say that some of them are college graduates and licentiates of the state board. There are more of these men in states where there are large cities. To grant unconditional reciprocity to any state would make it possible for such men to move into this state and demand license, and to carry on their damnable traffic in human life protected by the laws of the state. They would be enabled then to present a certificate of approval signed by the board of medical examiners to all who might question their professional standing.

Under the present rules of the North Carolina board this condition of affairs is prevented. Reciprocity is granted on the merit of the individual with little regard to the state from which he comes. With five other states we have established conditional reciprocity, but the North Carolina board reserves to itself the privilege of rejecting any applicant who applies. It will not register any physician through reciprocity until he has appeared before the board in person and shown himself to be a man of intelligence and to have the outward appearance of a gentleman. If he is addicted to alcohol, morphin or other intoxicants he cannot secure a license. Thirty days before his appearance before the board he must have filed with the secretary an application showing his professional attainments, accompanied by certificates of character and of his value as a citizen. The secretary then makes inquiry concerning the applicant and secures absolute proof of his high standing both from a moral and mental standpoint. In this way those who have been for a number of years in reputable practice in another state, and whose educational attainments are regarded as satisfactory, can as a rule obtain reciprocal license in North Carolina. Itinerants, alcoholics and the unqualified are rejected.

The state board of medical examiners can revoke a license if the holder thereof has been guilty of "grossly immoral conduct." It is practically impossible for the board to take such action, however, unless the physician has been convicted in the courts. The reason for this is obvious. The board does not constitute a court and has no power to summon witnesses. It cannot compel a man to appear for trial, nor can it convict him without hearing his defense. It cannot force a man to stop practice, nor can it fine or imprison him. If a man's license were rescinded he could continue in practice until the courts compelled him to stop. During its sessions the board does not have sufficient time to consider these cases, nor would it receive compensation for holding an extra session. In dealing with any case of illegal practice the final appeal is to a jury. Every year the complaint is made that no jury will convict these men, which but shows the helplessness of the board in dealing with these cases. For the board to rescind the license of a man whom no jury will convict would probably result in a damage suit against the board.

EPIDEMIC POLIOMYELITIS

TWELFTH NOTE: THE VISCERAL LESIONS OF HUMAN CASES *

SIMON FLEXNER, M.D.
FRANCIS W. PEABODY, M.D., AND GEORGE DRAPER, M.D.
NEW YORK

Epidemic poliomyelitis has been viewed as a disease of the central nervous system in which general visceral lesions, if present, are inconspicuous and unimportant. The demonstration of the specific nature of the infection revives the question whether, after all, the significant attendant lesions are confined to the nervous organs. Accurate histologic studies of the disease in human beings and monkeys have shown that the lesions in the nervous system are widely spread and affect the spinal cord, intervertebral ganglia, medulla, pons, cerebellum, cerebrum, and meninges, and both the gray and the white matter of the spinal cord and brain are subject to injury. It is not surprising, therefore, to find that general visceral lesions are present in fatal human cases.

During the past summer the organs from eleven children, ranging in age from 3½ months to 9½ years, became available for study. Of the eleven children, ten died on the third to the eleventh day of illness, and one child, having survived the acute stage of poliomyelitis, succumbed two months later to laryngeal diphtheria. The cases occurred in the services of the Hospital of the Rockefeller Institute, the Smith Infirmary, Staten Island, and the New York Hospital. For the outside specimens we are indebted to Drs. Donovan and Elser.

* From the Rockefeller Institute for Medical Research, New York.

LYMPHATIC SYSTEM

In 1888, Rissler[1] described the pathologic findings in three acute cases of epidemic poliomyelitis that had been observed clinically by Medin. Two were in children, aged 5 months and 4½ years, respectively, and one was in an adult 21 years old. Both children presented swelling of the agminated and solitary follicles of the intestine and enlargement of the mesenteric glands and of the spleen. The adult showed a swollen spleen, but no change was observed in the mesenteric glands. The liver and kidneys are stated to have shown, in all cases, cloudy swelling. There are no records of microscopic examinations. In 1910, Strauss[2] reported on the pathologic conditions observed in four children, ranging in age from 1 to 9 years, who succumbed during the acute stage of poliomyelitis. The findings, which were practically uniform, consisted of enlarged thymus, swollen mesenteric glands, hypertrophied agminated nodules of the intestine, and prominence of the Malpighian bodies of the spleen. The records of the microscopic changes are very brief. The spleen and mesenteric lymphatic glands are stated to have shown hyperplasia of the lymphoid follicles and "acute inflammation". Among the other students of the disease, Harbitz and Scheel,[3] and Wickman[4] may be mentioned as alluding to hypertrophy of the lymphoid tissue of the intestine and the spleen in children. In adults, this condition has either been little or not at all developed or overlooked at autopsy.

All the fatal cases examined by us showed some, and usually a high degree of hypertrophy of the lymphoid tissues. The affection of these tissues was wide-spread, if not universal, and included the tonsils, small intestine, thymus and the superficial and deep lymphatic glands. The glands about the trachea and bronchi and those of the abdominal cavity were usually much enlarged and definitely softened in consistence. The mucosa of the large intestine escaped affection, although the mesocolic glands did not. While the cervical, axillary and inguinal nodes do not become prominent, they all showed definite enlargement to the naked eye. The spleen was somewhat enlarged and the appearance was universally altered. The Malpighian bodies were prominent, and the pulp was increased and of dark or grayish hue. Defects in the intestinal mucosa were never observed. The necropsies were performed a few hours after death, so that the organs were secured in a state free from postmortem changes.

HISTOLOGIC EXAMINATION

The significant microscopic appearances are of two kinds: those affecting the lymphoid tissues and those affecting the parenchymatous organs. The former are not only generally present, but are also of quite uniform character. It should be stated, first, that the microscopic lymphoid nodules in the walls of the blood-vessels and bronchi in the lungs, and in the periportal connective tissue in the liver, tend to be increased. The characteristic lesions consist of hyperplasia of cells of the lymph-nodes and of the lymph-sinuses of the lymphatic glands and of the corresponding parts of the spleen and hemolymph glands. The most striking effect is that of the nodes, the centers of which show transformation into pale areas composed of cells of the endothelioid type. The histologic appearance is very much like that of the mesenteric glands in typhoid fever, as described and figured by Mallory.[5] The proliferated cells are probably those of the reticulum; and many are in a state of degeneration and disorganization. Where the latter process is advanced, a rich emigration of polynuclear leukocytes has taken place. The degree of cell-inclusion of lymphoid cells, cell-fragments and red corpuscles by the endothelioid cells, is small and far less than in typhoid fever. Mitotic figures are fairly frequent in the nodes, but they are far more frequent in the lymph-sinuses, where the same proliferative process is going on. There appears to be less necrosis of cells in the sinuses than in the nodes. This process is general throughout the body; it exists in the tonsillar tissue, in the intestinal mucosa and in all the superficial and deep lymphatic glands. In the intestine, the diffuse lymphoid tissue of the mucosa adjacent to the lymph-nodules is affected, but the proliferated cells do not invade the submucosa, muscle and peritoneum, as in typhoid fever, and the epithelial layer covering the swollen nodules is intact.

The characteristic appearances observed in the parenchymatous organs relate to the lungs and the liver. The lungs, in several instances, show within the capillary and other small vessels a considerable number of myeloid cells of the megakaryocytic type. Similar cells are found in some sections of the spleen. But the lesions in the liver are conspicuous and, apparently, constant. They consist of hyaline focal necrosis of liver-cells, followed by regeneration and invasion by lymphoid cells and polynuclear leukocytes. The number of areas of necrosis is remarkably large; the extent of the necrosis varies from a few cells to an eighth of a lobule. The liver-cells appear hyaline, stain deeply in eosin, are coalesced, and are sometimes in process of disintegration. The location of the necroses is remarkable; they are not infrequently adjacent to the portal spaces, but they are far more common about the central and sublobular veins. The smaller ones are readily overlooked; the larger ones resemble the "lymphoid-nodules," so-called, of the liver in typhoid fever. What is remarkable is the large number present in the sections—a dozen or a score or more of separate areas may occur in an ordinary section. The rapidity with which regeneration is attempted is a striking feature; proliferated nuclei of liver cells, arranged often in double rows so as to simulate bile-ducts, occur in all the specimens. When it is recalled that the obvious illness in some instances was only of three or four days' duration, and in most cases was less than seven days, both the wide extent of the necrotic injury and of the marked effort at repair are worthy of being noted.

SUMMARY

A study in children of the general visceral lesions of epidemic poliomyelitis leads us to place the disease among the affections in which the organs generally suffer injury. The main injury appears to be inflicted on the nervous organs, next on the lymphatic organs, and last on the parenchymatous organs. Of the last, the focal necrotic lesions of the liver are especially impressive. Whether the organic lesions, exclusive of those of the nervous system, are to be attributed to parasitic action or to the action of toxic elements of parasitic origin, is,

1. Rissler: Zur Kenntnis der Veränderungen des Nervensystems bei Poliomyelitis anterior acuta, Nord. med. Ark., 1888, xx, No. 22, p. 1.
2. Strauss: The Pathology of Acute Poliomyelitis, Report of the Collective Investigation Committee on the New York Epidemic of 1907, p. 68.
3. Harbitz and Scheel: Pathologisch-anatomische Untersuchungen über akute Poliomyelitis, Christiania, 1907.
4. Wickman: Die akute Poliomyelitis, etc., Handb. d. Neurol., Berlin, 1911.
5. Mallory: A Histologic Study of Typhoid Fever, Jour. Exper. Med., 1898, iii, 611.

at present, a matter of conjecture. But the polymorphonuclearcytosis of epidemic poliomyelitis is caused not only by the lesions of the nervous system, but also by lesions of the lymphatic tissues and liver. This consideration will serve to explain certain discrepancies in the cell-findings in the cerebrospinal fluid, removed by lumbar puncture, and in the circulating blood.

Sixty-Sixth Street and Avenue A.

REPORT OF A CASE OF PAROXYSMAL TACHYCARDIA *

HERBERT M. RICH, M.D.
DETROIT

Last year I published a paper on paroxysmal tachycardia[1] in which I reported one case which had been under observation for about three years. This patient has a mitral stenosis. She is still seen occasionally, has better general health than for several years, but is subject to these attacks at regular intervals. Another case came under my observation last May, and it presents certain interesting features which prompt me to report it.

History.—This patient, a married woman of 29, came to me complaining of a distressing irregularity of the heart. A few weeks previously she had had a miscarriage followed by a peritonitis. I did not see her during this time. At my first visit she complained of weakness, shortness of breath, and pain in the cardiac region in addition to the irregularity mentioned above. I found no murmur, the heart slightly enlarged to the left (nipple line), sounds at the apex diffuse, with some tenderness in the fifth intercostal space just outside the nipple line. There was no arhythmia but an apparent unevenness in the force of the beats, as though the ventricular contraction were incomplete. In view of the later developments, this seemed to be an interference with nervous impulse rather than muscular insufficiency. The patient gave an interesting cardiac history. At the age of 13 she had jumped rope until her heart gave out. She was confined to bed at this time and was very sick. At intervals since she has had attacks of rapid heart, or "palpitation." These attacks always begin with a "thud" and she realizes instantly that an "attack" is on. It ceases as suddenly as it began, and is followed by a momentary faintness, after which the patient is conscious of no after-effects. The duration varies from a few minutes to eight or nine hours. She sometimes wakes out of a sound sleep at night to find her heart racing, while more often it follows some severe exertion. These attacks have now persisted for sixteen years with no essential change. She has a few times noticed that the palpitation would cease after some sudden movement, such as jumping abruptly out of bed. From this story I made a provisional diagnosis of paroxysmal tachycardia and asked the patient to call me when she had an attack. Bearing in mind that the pathology of this condition is a fibrosis of the primitive cardiac tissue, it is not difficult to believe in the possibility of such a traumatic origin as that mentioned.

Treatment and Result.—October 29 I was fortunate enough to see her in what she called a typical attack. Her pulse was 192, regular, embryocardial, no murmur; patient anxious, skin moist, breath short. She thought this attack was lasting too long; it had already persisted three hours. As soon as I was sure of the condition, I explained to her that no drugs were known to have any effect on the immediate attack and suggested trying the postural methods referred to in my previous paper. She was first placed with her head down and instructed to take deep breaths, to hold and to push. This only choked her. After several other positions were tried without success, I advised the patient to continue these efforts at intervals and was putting on my overcoat to go, when she sat up in bed to try again. She folded her arms tightly across her chest, the right arm passing directly over her heart, leaned forward, took a deep breath, closed her glottis, and then compressing her chest with her arms, pushed as hard as possible. Then instantly she looked up and said, "It has stopped." I grasped her wrist and found that her pulse, which two minutes before had been 192, had now dropped to 96. In two minutes more she was walking about the room feeling as well as ever and discussing her attack as though it had been weeks before.

The interesting points in the case are:

1. The persistence of the attacks for sixteen years, in a person otherwise well and in a heart without valvular defect.
2. The unusual traumatic origin.
3. The interruption of the nodal rhythm and immediate relief by the deliberate and persistent attempts of the patient to increase her intrahtracic pressure under medical direction.

32 Adams Avenue, West.

* Read before the Wayne County (Mich.) Medical Society, December, 1911.

1. THE JOURNAL A. M. A., June 4, 1910, p. 1861.

PUBLIC AGITATION AND SOME UNNECESSARY ADENECTOMIES

CHARLES B. YOUNGER, M.D.
Instructor in Rhinology and Laryngology, Northwestern University Medical School
CHICAGO

There is no abnormal condition pertaining to childhood that has received greater publicity during recent years than that of adenoids. The profession has known for many years the evils attending this particular lymphatic enlargement, and has done much to enlighten the public on its harm. The newspapers and magazines must be given credit for the wide-spread dissemination of information among the laity, while public lectures by physicians in the larger cities, notably in Chicago, have had good effects. This agitation has reached the stage at which city health departments, acting through salaried inspectors, are practically excluding from the public schools children thus afflicted until the defect has been remedied. It is doubtful if there is anywhere within the domain of medicine and surgery a class of cases that show such uniformly satisfactory results as these. It has been my privilege to witness results of the adenoid operation in thousands of cases and such an experience must necessarily convince one of its great usefulness in properly selected cases.

Without depreciating in the least the good work done in this important field, however, I would like to sound a note of warning. The diagnosis of adenoid enlargement is relatively easy and for this reason is undoubtedly arrived at in many cases by the "snap-shot" method. The clinical picture is well known—the open mouth, protruding upper teeth, high-arched palate, the staring expression, history of sleeping with open mouth, snoring, restlessness, night terrors, imperfect development of the nares, impairment of voice tones, and in many cases faulty mentality. In brief, there are evidences of interference with nasal breathing and proper oxygenation. These signs are so clearly apparent in many cases that an actual, painstaking examination of the child is not made.

The steady increase in the number of children who apply to the free clinic for treatment, with a ready-made diagnosis and a prearranged method of procedure, has

forcibly called my attention to the careless tendency to omit proper diagnosis. It is by no means unusual for parents to volunteer the positive information that their children have adenoids and request immediate operation. They know something of the signs and symptoms and have made their own diagnosis, perhaps with more or less assistance from the neighbors. To convince some of them that they are wrong is not always easy, and to refuse to operate in certain cases causes evident disappointment and often a parting threat to have the desired operation performed elsewhere. Then there are the cases that have been passed on by the school inspectors. To their credit it must be said that they are usually correct in their instructions to parents, but they have many children to examine within limited hours and it is no doubt lack of time rather than lack of caution that is to blame for a small percentage of diagnoses that may be disputed. Still other cases of this sort are brought in by visiting nurses, who themselves have discovered what seem unmistakable signs of adenoids. A common source of fault is the presumption that, because in a given case there is enlargement of the faucial tonsils there must necessarily be troublesome enlargement of adenoids. A careful examination of the patients coming from various sources to the dispensary for adenectomy shows a few to be suffering from some obstruction to breathing other than adenoids. This paper is written in the interest of these occasional cases in which the adenoid operation is not clearly required.

Adenoids, also referred to as the pharyngeal tonsil and Luschka's tonsil, occupy a position in the vault of the pharynx, or nasopharynx, and are found variously distributed over the posterior wall. The adenoid mass, the two faucial tonsils and the lingual tonsil at the base of the tongue make up the lymphoid ring of Waldeyer, so called because of forming a more or less complete circle at the entrance to the pharynx. That there is a definite relationship between these various groups of lymphoid tissue cannot be disputed. Hypertrophy of one is usually accompanied by enlargement of the others to a variable degree, but this is no reliable criterion. For instance, many cases are observed in which the faucial tonsils are considerably enlarged, but without a noticeable increase in size of the pharyngeal tonsil. Again, we frequently find cases which demand attention because of a large adenoid mass, but in which there is no history of tonsillitis or sufficient change in the size or structure of the faucial tonsils to warrant their removal at the same time. Another exception to the alleged constant relationship between these lymphoid masses is that hypertrophy of the lingual tonsil is rare in childhood, during that period of greatest activity on the part of the other lymphoid structures. On the contrary, the lingual tonsil is prone to hypertrophy in adult life, at a time when its neighbors are quiescent. Therefore, reasoning from these well-known facts, it is my belief that we should take nothing for granted, but make our examination of these cases thorough before submitting a positive diagnosis and urging operation.

It is true that adenoid hypertrophy can often be diagnosed at a glance. The adenoid face or expression is pictured in every text-book on rhinology; but it is our ability to make a correct offhand diagnosis in most of these cases that is likely to lead us into occasional error.

Broadly speaking, any other obstruction of the nose may produce the same symptoms, and, in course of time, the same outward signs as those attributed to adenoids. Hypertrophic rhinitis is quite as prevalent in childhood as at any other time of life, and every rhinologist has observed many children who were unable to breathe through the nose with any satisfaction because of enlargement of the turbinate bodies. Deflections of the nasal septum and spurs are common to childhood and cause nasal stenosis. Foreign bodies are also obstructive and may cause total occlusion of the nares. This calls to mind a clinical case in which a little girl was brought for operation on the advice of a physician who had pronounced it adenoids. The patient was unable to breathe through the nose and there was a constant profuse mucopurulent discharge. A better example of the "mouth-breather" would be hard to find. The mother said that the same condition had then persisted for a year. Examination of the nose showed a foreign body firmly imbedded in the right nostril well posteriorly. It proved to be a shoe-button which, as a source of irritation and infection, had effectually closed both nostrils. Normal breathing was restored in a few weeks without an adenoid operation.

Another factor that may lead to error is the high arched palate and irregular protruding front teeth. This deformity is invariably associated in the literature with adenoid enlargement, but such association may as often be fanciful as real. That the two are frequently coexistent is acknowledged, but to make a diagnosis of adenoid hypertrophy from a casual inspection of the hard palate is the height of presumption.

Another cause of difficult nasal breathing is some congenital or acquired deformity in that region. For example, a slight anterior deviation of the spine so as to encroach on the nasopharyngeal space has been known to produce the symptom-complex of adenoids. Furthermore, a considerable hypertrophy of faucial tonsils, even in the absence of any appreciable adenoid enlargement, may easily confuse one without a careful examination.

Every child has normally a small mass of lymphoid tissue in the nasopharynx. This may vary in size from a few nodules no larger than peas to a growth the size of a hickory-nut, or even larger. As to its location, the bulk of the mass may be located in the median line with smaller collections to either side, the bulk may be laterally placed, or, in a certain class of cases, there may not be much enlargement, but such tissue as there is has located most disadvantageously over one or both Eustachian orifices. Occasionally the adenoid tissue may be found clinging to the choanæ or may extend downward sufficiently to be seen directly behind the uvula.

The symptomatology of adenoid enlargement covers a wide range, depending largely on the relation between the size of the mass and the dimensions of the nasopharyngeal cavity that contains it. For example, little or no disturbance of nasal breathing may arise from a fair-sized adenoid growth within a spacious nasopharynx. On the other hand, a small nasopharynx cannot accommodate much adenoid tissue without blocking the nares and causing marked ill effects.

It is not intended here, however, to attempt a detailed consideration of the various symptoms, the pathology or treatment. The purpose of this paper is merely to urge that we be not carried away by agitation or by enthusiasm, or by the desires or opinions of others, but that every suspected case of adenoids be placed on its own individual merits, that it be subjected to a careful examination to determine whether or not that particular child must undergo even so slight an operation. Indiscriminate operating in this class of cases is all the more objectionable in the light of our limited knowledge of the physiology of these tonsillar structures.

15 East Washington Street.

V. 5
1912

SYNCHRONOUS LIGATION OF SUBCLAVIAN AND CAROTID FOR ANEURYSM OF INNOMINATE

REPORT OF A SUCCESSFUL CASE WITH NEW TECHNIC

J. F. BALDWIN, A.M., M.D.
Surgeon to Grant Hospital
COLUMBUS, O.

Statistics afford only the most gloomy prognosis in the treatment of aneurysm of the innominate, and ligation of the subclavian in its first portion gives a mortality that is simply frightful. Thus Bryant, in his "Operative Surgery," gives twenty-one operations with nineteen deaths, and it is probable that while all successful ligations have been reported, many of the unsuccessful have failed to find their way into print. Binnie ("Operative Surgery") declares the first portion of this artery "unsuitable for ligation," and gives no technic for the operation. The only treatment, however, of innominate aneurysm requires ligation either of the innominate or of the subclavian and carotid, and notwithstanding the dangers of the procedure the operation must be undertaken in suitable cases.

Patient.—Mrs. F. M. R., aged 52, married 34 years, consulted me May 14, 1910, having been referred to me by the late Dr. A. W. Jones of Westerville; ten children, of whom eight living, in good health, the youngest, aged 10. Two children had died of summer complaint. Labors had been natural; two miscarriages without trouble. Patient's appetite was usually good; bowels usually constipated; kidneys normal; menstruation normal. In the previous December patient had first noticed a throbbing in her neck on the right side. Had no pain there, but discovered the lump accidentally. She had consulted Dr. Jones two weeks before, who made a diagnosis of aneurysm and referred her to me.

Examination.—An aneurysm was shown, involving apparently the beginning of the carotid and subclavian. It extended about 1½ inches above the clavicle. Radiographs confirmed the diagnosis and showed the involvement of the innominate. The matter was explained to the patient and her husband, and operation was accepted.

Operation.—May 19, 1910, under ether anesthesia. I had decided that the best exposure could be made by an incision nearly at right angles to the clavicle rather than by the classical incision recommended by the text-books. This incision was accordingly made directly over the space between the two attachments of the sternocleidomastoid. I had planned, if it became necessary, to cut one of these attachments, but this was unnecessary. A single superficial blood-vessel was controlled by a hemostat, and after that there was no hemorrhage; the field of operation was entirely dry, and the exposure perfect. The distal end of the innominate, with its bifurcation into the subclavian and carotid, was directly in the center of the field. A ligature could have been placed with utmost ease on the innominate, but it seemed safer to ligate its two branches, and accordingly these vessels were ligated with kangaroo tendon, using a double ligature to each, the ligatures being about one-fourth inch apart. Care was taken to use only sufficient force to occlude the vessel without injuring its coats. Incision closed without drainage.

Postoperative History.—Pulsation at the wrist at once disappeared. After some three or four days it could be detected faintly. (Even now, nearly thirteen months after operation, the pulsation at that point is decidedly weaker than on the opposite.) Patient recovered from the anesthetic nicely, and her only complaint was of headache. This headache was at first quite severe, but gradually diminished and was gone before she left the hospital. The right arm was a little cooler than the left, but at no time was there any danger of gangrene. The incision healed by first intention, and the patient left the hospital June 9.

Course.—At the present time, Dec. 4, 1911, patient's health seems to be perfect. There is a small lump in the region of the operation, which conveys to the finger the impression of an impulse coming from the aorta. This lump is presumably the obliterated innominate. Patient has no pain, is doing her own work as usual, and feeling entirely well now, more than eighteen months after the operation.

In reviewing the literature on this subject, previous to operating, I was somewhat disturbed by the suggestion of Halsted that in cases of this kind the blood-vessels should not be ligated, but should be merely compressed for several days so as to determine whether ligation would be safe. Could compression for only a few hours enable one to determine its safety, the proposition would seem to be feasible, but since we know that disaster may follow a good many days after ligation, it seemed to me very evident that this preliminary compression would not be practicable, at least in a case of this kind. The danger of failure in the collateral cerebral circulation cannot be anticipated or guarded against, but must be accepted as one of the risks of the operation. I have no doubt that had I resorted to preliminary compression, with the onset of the headache I should have felt that the collateral circulation could not be established, and would have released the compression and abandoned the operation.

The method of exposure which I adopted was certainly the best possible in this particular case, but I can find no record of its having been adopted by any surgeon previously.

405 E. Town Street.

MARKED HEMORRHAGE FROM THE BOWEL IN FIVE CASES OF TUBERCULOSIS*

LEROY S. PETERS, M.D.
AND
E. S. BULLOCK, M.D.
SILVER CITY, N. MEX.

Until the past five months, from an experience covering a period of fifteen years in the treatment of tuberculosis, a case of marked hemorrhage from the bowel has never occurred among our patients. Nor in a systematic search of the literature have we been able to find reference to such a condition. Dr. Sherman G. Bonney of Denver has sent us a report of two cases coming under his observation. Col. George E. Bushnell, Maj. C. E. Koerper and Capt. E. H. Bruns, of the United States General Hospital for Tuberculosis, Fort Bayard, N. Mex., all inform us that no such condition has been met with in their work there. Beginning with June, 1911, however, we have had three cases which, together with those of Dr. Bonney's, form the basis of this report.

CASE 1 (Bonney).—Patient dead after marked hemorrhage from bowel.

CASE 2 (Bonney).—Male, aged 42. Tuberculosis for fifteen years. Marked fibrosis with cardiac dislocation and cavity formation. No fever. No evidence of intestinal disturbance for some months previously. Tarry stools reported for some time before copious hemorrhage from bowel.

Patient became thoroughly exsanguinated, but under immediate stimulation, rest in bed six to eight weeks with regulated diet and opiates, recovery eventually took place.

CASE 3 (Peters and Bullock).—Male, aged 23. Tuberculosis for three years; Turban stage iii. Temperature, 102; pulse, 100; blood-pressure, 116. Tuberculosis of intestines.

* From the New Mexico Cottage Sanatorium

Three to four movements a day with pain, mucous and blood-streaked stools. Severe hemorrhage from bowel, Nov. 4, 1911, which ended in death.

Case 4. (Peters and Bullock).—Admitted March 9, 1911. Male, aged 27. Tuberculosis two years; Turban stage iii. Temperature 100.1; pulse, 90; blood-pressure, 144. Tuberculosis of the intestines, fistula in ano, seven to eight movements a day with pain and gas. Mucous and blood-streaked stools. June 15, severe hemorrhage from bowel with rise of temperature to 103. Several smaller hemorrhages covering a period of three months in all.

With absolute rest, liquid diet and opiates patient went on to good recovery. All symptoms of tuberculosis of intestines disappeared; patient gained 13 pounds. Feels well, appears well; temperature, 99; pulse, 80; hemoglobin, 100. This patient had several small pulmonary hemorrhages at the onset of the disease.

Case 5 (Peters and Bullock).—Admitted Aug. 2, 1911. Male, aged 29. Tuberculosis six years; Turban stage iii. Temperature, 99.2; pulse, 100; blood-pressure, 138. No symptoms of intestinal tuberculosis.

Temperature suddenly rose to 104, followed by severe hemorrhage from bowel with two smaller hemorrhages on the two succeeding days. Temperature fell by lysis and under absolute rest, liquid diet and opiates, patient made good recovery. There were no further symptoms of bowel condition.

It is interesting to note that in one of Dr. Bonney's cases and in one of ours, no symptoms of tuberculosis of the intestines were noted, the hemorrhage being the first evidence of the disease. The fatal case in our series was that of a far-advanced consumptive who was too weak to stand the loss of blood and whom we expected to die at any time as a result of his general weakened condition. Whether or not this is true of Dr. Bonney's case we are unable to state. Our other patients, as well as Dr. Bonney's remaining patient, made good recoveries and suffered apparently no ill effects from the bleeding. In all of our cases a Widal test was made to satisfy ourselves of the non-existence of typhoid, although the symptoms were never at any time characteristic of that disease.

A CASE OF DOUBLE TUBAL PREGNANCY

EDWARD T. MILLIGAN, M.D.
DETROIT

The patient, Mrs. G., aged 29, was the mother of three children. All her confinements had been normal. She nursed her last child, now 15 months old, until it was 9 months of age. One month from the time she ceased nursing her baby, the patient menstruated every twenty-eight days. July, 1911, menstruation was absent. She believed it was due to pregnancy.

September 30, the patient was seized with intense pain in the abdomen, followed by a feeling of profound exhaustion. After expelling a great quantity of gas and taking a swallow of whisky, she regained her strength.

October 16 I was called to see her at 4 a. m. and found her suffering from severe shock. I found a soft mass occupying each side of the uterus and made a diagnosis of ruptured extra-uterine pregnancy. She was removed to St. Mary's Hospital and the next day, on opening the abdomen, an ectopic pregnancy of the right and left tubes was revealed. There was a three months' fetus in each tube. Recovery was uneventful and the patient returned home, Nov. 1, 1911.

687 Jefferson Avenue.

And There Were Giants in Those Days.—We occasionally run across funny things in manuscripts; here is one: "While walking along a street in Pittsburgh, a man who was cleaning windows fell from the fourth story and landed on the patient."

Therapeutics

RECTAL ALIMENTATION

When a patient is unable to take an adequate amount of nourishment by the stomach, or, having taken it, is unable to retain or digest it, the physician is obliged to try to assist nutrition by way of the rectum.

Instances have been related in which patients have survived when fed entirely by the rectum for periods of from several weeks to many months, but such cases are rarely seen at the present day, and it is believed that at least some of these reports were made under a misapprehension of the true state of affairs.

It is customary to estimate the amount of food required to maintain an equilibrium of nutrition by a patient at rest at 1,800 calories. Dr. David L. Edsall, basing his opinion on observations made by himself and Dr. Caspar Miller (*Am. Jour. Med. Sc.*, November, 1906, p. 679), has estimated the amount of nutriment which can be absorbed from the colon and rectum in twenty-four hours as from 200 to 300 calories; so that if these figures are correct, it is perfectly apparent that it is entirely impossible to maintain adequate nutrition of the body by this method of feeding alone.

The later researches of Dr. L. M. Gompertz, of New Haven, Conn., reported in the Transactions of the Connecticut State Medical Society, 1910, p. 240, show that iodid of potassium dissolved in water and injected into the rectum is absorbed, and excreted so rapidly in the urine and saliva, that it may be detected after intervals varying from eight to twenty-five minutes. He also showed that solutions of dextrose varying in strength from 3 to 15 per cent. were absorbed very freely by the rectal and colon mucous membrane. He found that when 200 or 300 gm. were injected in 10 or 15 per cent. solution, from one-half to three-fourths of the entire amount was absorbed, so that in this way he was able to provide about one-third of the necessary number of calories to sustain the body while at rest.

Patients often acknowledge that they feel very much better after they have received a nutrient enema. This is probably due to two causes. One is the psychical effect of feeling that they are taking nutriment. The other is the increase in the total fluids of the body, due to the absorption of the watery part of the enema. This deficiency of fluids in the system is one of the sources of great discomfort experienced by patients who are not taking the usual amount of solid and liquid food.

One of the first questions is as to what extent food injected into the rectum is digested. It is probable that this change occurs to a very limited extent, if at all. It has been pointed out that the mucous membrane of the rectum contains the follicles of Lieberkühn and also solitary glands, and that possibly under the stimulation of the presence of food in that organ, their function may be stimulated, so that they may take some part in the digestion of the food. Furthermore, it is possible that some of the enzymes secreted in the small intestine are not entirely utilized in that part of the digestive tract, but pass on into the large intestine and act on any undigested food present there. It is also pointed out that when a nutrient enema is retained in the colon, frequently a reverse peristalsis is set up, so that the food is carried back as far as the cecum, and there is considerable evidence to prove that in very rare instances this reverse peristalsis may continue until the food which is injected into the rectum is expelled from the mouth.

When nutrient material injected into the colon is carried by reverse peristalsis into the small intestine, it probably undergoes some digestion in the same way as when taken by the mouth.

In the usual absence of any digestive change in the food injected into the rectum it has been observed that very little of the fat is absorbed, that somewhat more of the protein is absorbed, but the exact amount of this has not been definitely determined, and evidently varies in different individuals. The ordinary forms of carbohydrate are also absorbed to but a very limited extent. On the other hand, as already mentioned, water is very freely absorbed, and sodium chlorid in solution in water is also very completely absorbed.

Another objection to the administration of undigested food by the rectum is that it is liable to undergo fermentation, with the production of gas, and this is likely to cause irritation, congestion and inflammation of the colon mucous membrane, so that the nutrient enema is retained with difficulty, or not at all.

At the present time there seems to be good reason to believe that ordinary food, undigested, is not very freely absorbed by the rectal and colon mucous membrane; consequently most practitioners who employ this form of alimentation use a predigested food. Milk and eggs are readily available for this form of nutrition. A formula attributed to H. C. Wood is as follows:

R	Gm. or c.c.		
Pancreatini	30	or	gr. v
Sodii bicarbonatis	1 30		gr. xx
Aquæ	30		fl. ʒi

M. et Sig.: Add to 1 pint of milk.

To this may be added the whites of one or two eggs, and the whole kept at a temperature of 110 F. for from one to two hours, the longer time permitting more complete digestion.

Besides water, peptonized food, and salt, alcohol is often an ingredient of a nutrient enema, and is frequently indicated.

The definite observations referred to would seem to show that the most important ingredients of a nutrient enema are water, sodium chlorid, dextrose, alcohol and peptonized milk and egg. Of course these are not all to be combined at one time, but a judicious combination must be selected according to the individual indications in each case.

Before the first nutrient enema is given the rectum should be washed out by an enema of simple warm water or normal saline solution. Usually one pint of water will be sufficient for this purpose. This cleansing enema should be administered one hour before the nutrient enema. Some advise giving the cleansing enema before each nutrient enema; others advise giving it twice a day; and still others once a day. Care should be used not to give it too frequently, lest the mucous membrane of the rectum become irritated so that it will not retain the nutrient enema. The nutrient enema should not be administered either cold or hot, because cold or hot fluids are likely to stimulate the muscular coat of the rectum and lead to their expulsion. The best temperature is between 95 and 105 F. Probably, if the attempt is made to introduce it at the latter temperature, the actual temperature when the fluid enters the rectum will be nearer 95 F. The injection should be administered with a fountain syringe, and should be allowed to enter the intestinal canal slowly. A long tube should be used, so that the fluid may be deposited about the sigmoid flexure or as near to that part of the large intestine as possible. The fluid absorbed at this point passes into the portal vein and goes to the liver where it undergoes assimilation. When it is absorbed from the lower part of the rectum it enters the vena cava and is less favorably assimilated. Furthermore, the higher up in the large intestine the enema is placed, the greater chance is there for reverse peristalsis, and consequently better digestion and absorption.

The amount of each enema must vary according to the tolerance of the lower intestine of each individual patient. Some patients can retain a pint of warm fluid, but for most patients 6 or 8 ounces is a safer amount to use. This may be increased if well tolerated. Some advise repeating the injection at intervals of from two to three hours, but intervals of four hours are better, and a total of from four to six in the twenty-four hours is generally as many as it is practicable to use.

The patient should, of course, be lying in bed while the enema is being administered, and should retain the recumbent position for at least an hour after the operation is completed. J. B. Murphy advises administering medicinal or nutrient enemata, drop by drop, for several hours (THE JOURNAL, April 17, 1909, p. 1248).

Indications for the use of nutrient enemas as presented by Dr. T. J. Bennett, of Austin, Texas (*Texas Med. News*, June, 1906) are:

1. Any temporary obstruction to the entrance of food into the stomach, such as swellings about the throat, growths, foreign bodies, etc.
2. Paralysis from diphtheria, delirium, coma, or conditions of the insane in which refusal to take food is persistent.
3. Gastritis, gastric ulcers, cancer, or any kind of obstruction at the cardiac or pyloric ends of the stomach, or along the alimentary canal above the rectum.
4. Reflex vomiting when unduly prolonged, as from seasickness or pregnancy.
5. Conditions of exhaustion from wasting diseases in which defective absorption and extreme anorexia are present, as supplemental to stomach feeding.
6. And surgical operations on the stomach and upper alimentary canal.

Between thirty and thirty-five years ago the subject of rectal alimentation excited considerable interest in New York City, and Dr. Andrew H. Smith (*Med. Rec.*, March 29, 1879, p. 308) reported a number of cases in which he had used defibrinated blood in securing supplementary rectal alimentation. He used from 1 to 3 ounces of the blood at a time, and repeated the injections at intervals of from two to three hours, in acute cases. In chronic cases he used from 3 to 6 ounces, once or twice a day. He found that when 3 or 4 ounces of blood were injected into the rectum, it was "completely absorbed within eight or ten hours, and no trace could be found in the following fecal evacuation." If eight or ten ounces were used, a part of it "appeared in the feces as a black mass."

The nutrition of the patient cannot be maintained by rectal alimentation, although frequently patients feel better for several days, and perhaps at the end of that time acquire the ability to take food by the mouth. Yet in cases in which there is not a considerable probability that this power of taking food by the mouth will be regained, and in which an operation is indicated, as in stricture of the esophagus, it is unwise to postpone the operation in the hope that by rectal alimentation the patient may be brought into a better condition for the operation.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 Dearborn Avenue . . . Chicago, Ill.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[For other information see second page following reading matter]

SATURDAY, JANUARY 13, 1912

NATURAL AND SYNTHETIC SALICYLIC ACIDS

For many years, a discussion has been going on, especially in this country, as to the relative merits of natural and synthetic salicylic acids and the salts made therefrom, the claim being frequently made that the synthetic is not only less effective, but more dangerous and more toxic than the natural. This discussion has been at times of a character almost bordering on the ridiculous and reminding one of the old lady who was confident that she could detect a difference between "naturally" and "artificially" hatched chickens. The belief that there is such a difference has also been sedulously cultivated by certain firms which believe they have, or assert they have, the natural acid to sell—at a price about seven times that of the synthetic product. Physicians have frequently in this, as in other instances, too readily accepted as true the oft-repeated statements of the manufacturers and of the uncritical. There is some room for confusion, for, as Waddell shows in a recent paper,[1] up to the present time there has not been a single serious, unbiased attempt to solve the question of a difference between the two acids by accurate and controlled clinical observations; furthermore there has been but one experimental study on the subject, that of Charteris and Maclennan, and this Waddell shows to be very inconclusive on account of the methods employed. The experiments of Charteris and Maclennan were, moreover, performed twenty-two years ago, so that even if they had been satisfactory they would throw but little light on the synthetic salicylic acid on the market at present.

It goes without saying that the so-called synthetic salicylic acid and the salicylates were more impure twenty-two years ago, for the production of salicylic acid from phenol was at that time a relatively new process; and further, the phenol then available is known to have been far from pure. It is therefore absurd to speak of the "synthetic" salicylic acid and salicylates as impure and dangerous because the products of over twenty years ago may have been so. Yet the experiments of Charteris and Maclennan are still extensively quoted as though they had a distinct bearing on the present-day problem.

1. Waddell, J. A.: A Comparative Investigation of the Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin, Arch. Int. Med., Dec., 1911; see abst., this issue, p. 143.

It is an encouraging sign of the changing order of things in therapeutics that such beliefs, based on a mixture of mysticism, commercial exploitation, misinterpretation and tradition, no longer remain unchallenged. The paper of Waddell is part of an extensive chemical, experimental and clinical study of the natural and synthetic salicylic acids undertaken by the Research Committee of the Council on Pharmacy and Chemistry, the clinical experiments being carried out by competent clinicians at some of the largest hospitals, the chemical experiments, which include the various products on the market, being performed in the Association laboratory. While the clinical work will, no doubt, add to our knowledge regarding the therapeutic value of salicylates, it is not probable that it will affect the conclusions brought out by the pharmacologic experiments, that there are no differences in the toxicity of natural and synthetic salicylic acid, such as might become manifest in the clinical use of the drug.

The present paper deals only with the experimental side of the subject and contains an account of an extensive series of experiments on the toxicity of sodium salicylate of different origins. The drugs employed were obtained from four sources: one sample undoubtedly derived from genuine oil of birch, one a commercial "natural" product and two samples of the ordinary synthetic salt. The experiments were performed on three widely different classes of animals—cats, rabbits and rats. Not the slightest difference either in toxicity or in any of the symptoms produced by the four samples could be detected.

Other experiments, as stated above, will deal with the relative efficiency of the different acids in clinical cases and with a thorough chemical examination.

In discussing a powerful drug like sodium salicylate it is important to remember that untoward symptoms may result from the best of preparations when pushed to the limit of tolerance; that such symptoms have been observed more frequently after the use of the synthetic than after that of the natural drug is readily explained by the fact that the former is used so much more extensively than is the latter. Moreover, there are indications that both the natural and synthetic products undergo some change in the course of time and under some conditions. It is further quite probable that the improperly purified synthetic as well as the natural may at times contain by-products of an injurious nature. Physicians who have samples of the drug, the purity or efficiency of which they have cause to suspect, are invited to send them to the laboratory of the American Medical Association.

The first feature of the present investigation, however, is not the question whether there are impure or adulterated specimens of the synthetic salt on the market, but whether there are essential differences between the pure natural and the pure synthetic drugs; the answer of the present investigation to this question is emphatically a negative one as far as toxicity is concerned.

V. 5
1912

THE REFEREE BOARD REPORT ON SACCHARIN

The publication of the detailed report[1] of the investigations carried out by the Referee Board in response to questions raised by the Secretary of Agriculture bearing on saccharin and the public health affords numerous data of interest aside from the immediate purpose for which the work was planned. The main general conclusions reached by the scientific experts are summarized as follows:

"1. Saccharin in small quantities (0.3 gram per day or less) added to the food is without deleterious or poisonous action and is not injurious to the health of normal adults, so far as is ascertainable by available methods of study.

"2. Saccharin in large quantities (over 0.3 gram per day and especially above 1 gram daily) added to the food, if taken for considerable periods of time, especially after months, is liable to induce disturbances of digestion.

"3. The admixture of saccharin with food in small or large quantities has not been found to alter the quality or strength of the food. It is obvious, however, that the addition of saccharin to food as a substitute for cane-sugar or some other form of sugar must be regarded as a substitution involving a reduction of the food-value of the sweetened product and hence as a reduction in its quality."

The decision of the government, already referred to in these columns, to exclude saccharin from commercial use in foods must appeal to everyone as correct and inevitable; one might well question whether this elaborate research was necessary to furnish occasion to forbid the use of a substance which can find little justification for its introduction except on the grounds of deception or concealment of inferiority. No intelligent individual can have supposed that a few milligrams of saccharin are the nutritive equivalent of the sugar, the absence of which it conceals; and the therapeutic uses of saccharin can safely be left in the hands of the medical profession.

As a scientific contribution to the physiology of nutrition, however, this report is worthy of more than passing attention. The experimental work was conducted by the late Professor Herter of New York and Professor Folin of Boston. The "small dose" of saccharin adopted was up to 0.3 gram (5 grains) per day, while the "large dose" ranged from 0.75 gram to 1.5 grams daily. These amounts correspond in sweetening power to approximately from 5 ounces to 1½ pounds of cane-sugar per day. Several of the human subjects took saccharin almost uninterruptedly with every meal for a period of about five months.

We cannot refer here in detail to the many points of physiologic interest touched on in the report. It is clearly emphasized, however, that the vaunted preservative effects of saccharin are at best extremely small. Thus the last plausible justification for its employment is made to fade away. Fortunately the very character of the compound serves as an effective barrier against its being used in large amounts; for its taste, an extreme sweetness in dilute solution, merges quickly into an intense and persistent bitterness when the concentration is materially increased. The lethal dose for rabbits lies beyond 10 grams. This in itself would be no guarantee of any innocuousness of the continued use of saccharin, except for the fact that all which is absorbed from the intestinal tract is rather promptly eliminated and that there is no storage of the substance in the body. Saccharin appears to be excreted unchanged, and a possible cumulative effect of the drug is thus made unlikely. These facts are of great value in considering the safety with which saccharin can be used in its legitimate sphere, namely, as a substitute for sugar by patients suffering from diabetes, or in certain treatments for the reduction of obesity.

The disturbances which, though by no means of constant occurrence, are charged to the use of larger doses include serious distaste for the substance, modifications of gastric functions (increased free hydrochloric acid), changes in the reaction of the feces, and occasional increase in the putrefactive products (indol, skatol, hydrogen sulphid) in the stools. Otherwise the findings are what may be termed "negative".

The elaborate analytical tables, which could scarcely obtain publication without the cooperation of financial support such as the government freely gives, incidentally bring renewed evidence of the validity of some of the well-known conclusions with respect to nitrogenous metabolism which were formulated several years ago by Professor Folin.[2] The constancy of the creatinin elimination in man as an index of metabolism, and the relative variability of the output of urea and ammonia compounds in dependence on the exogenous, or diet factors are clearly shown. Such data, to mention only a few, will serve a useful purpose quite apart from the immediate purpose of the investigation. Considered especially as a physiologic research, this report is a credit to American investigations in human nutrition.

1. Influence of Saccharin on the Nutrition and Health of Man, U. S. Dept. of Agric., Rep. No. 94, Washington, 1911.

WATER-DRINKING WITH MEALS

Pursuant to a tradition of long standing, it is a common custom to forbid the drinking of water at mealtime. There was a time when such advice appeared most reasonable. The grounds therefor are summed up in the following quotation from a recent writer:[1]

"We can lay down the definite and certain rule that it [water] should never be drunk at meals, and preferably not for at least one hour after the meal has been eaten. The effect of drinking water while eating is, first, to

2. Folin: A Theory of Protein Metabolism, Am. Jour. Physiol., 1905, xiii, 45.

1. Carrington: Vitality, Fasting and Nutrition, Rebman, New York, 1908, p. 397.

artificially moisten the food, thus hindering the normal and healthful flow of saliva and the other digestive juices; secondly, to dilute the various juices to an abnormal extent; and thirdly, to wash the food elements through the stomach and into the intestines before they have had time to become thoroughly liquefied and digested. The effects of this on the welfare of the whole organism can only be described as direful."

It is, of course, obvious that the insufficient comminution of food in the mouth cannot easily be compensated for by the succeeding muscular activities of the alimentary tract. But there are numerous individuals who drink water liberally at meals, yet do not follow this practice for the purpose of washing down the products of incomplete mastication.

Professor Hawk and his pupils at the University of Illinois have been investigating, during the past few years, the validity of the current attitude toward this question, with results quite at variance with the traditional idea.[2] When the influence of water-drinking with meals was examined by direct experiment on man the alleged direful consequences were found missing. There were no apparent ill effects. On the contrary, the general conclusion from all the findings was that "during water ingestion with meals there is a better digestion and a more complete utilization of the protein food and that this effect is much less marked with a small water ingestion than with a large one. It is also more or less permanent, with the result that in an individual accustomed to taking considerable water with meals the effects of decreasing or increasing the volume ingested are not immediately obvious." Not only is there a more complete utilization of the protein constituents of the diet attributable to ingestion of large amounts (1,000 c.c.) of water with meals, but a "pronounced improvement in the digestibility of fat was observed." The decreased fecal output further involved a decreased excretion of carbohydrate and, what is most significant, a diminution in the output of bacterial substance in the stools.

Without attempting to emphasize Hawk's statement that "in general, the more water taken the more pronounced were the benefits," it may be pointed out that the essential feature, i. e., the absence of untoward results is, after all, quite in harmony with the trend of recent investigations of the gastro-intestinal activities. Water has been shown by Pawlow and others to stimulate, if anything, the flow of gastric juice and also to act as an excitant of pancreatic secretion. The dilution of the products of reaction is by no means necessarily detrimental to the progress of the chemical changes in the alimentary tract. One might therefore be prepared to admit as reasonable Hawk's statement that "the beneficial effects noted are probably due to the stimulatory action of water on the digestive secretions, to the increased dilution which facilitates enzyme action and materially aids in absorption, and to a conservation of the intestinal energy involved in the secretion of a diluting fluid which is necessary when insufficient water is ingested."

Since there is a constant tendency, at least among persons whose knowledge of the given subject is slight, to carry to extremes conclusions derived from experimental data, and since such conclusions are sure to reach the laity sooner or later, it seems worth while to add a warning against the indiscriminate and excessive use of large quantities of water. While the ingestion of moderate quantities of water with meals may be harmless in persons with good gastric motility, since the excess of water is rapidly expelled into the intestine, it is likely to be harmful in persons whose motor power is below par; and it is probable that there are many such who do not consider themselves ill enough to consult a physician. Furthermore, nothing that has been said is intended to lend any support to the American custom of drinking water that is ice-cold. The experiments of Hawk and his pupils indicate that our ideas with regard to the drinking of water must be revised, but we must still consider the individual case. We shall have to wait for reports of observations from a larger body of observers before it will be legitimate to put this revision into dogmatic form. In the meantime we may allow water more freely with meals, subject to the individual exceptions which experience reveals.

2. For the published papers in this series see: I. Hawk: Univ. Penn. Med. Bull., 1905, xviii, 7. II. Fowler and Hawk: Jour. Exper. Med., 1910, xii, 388. III. Rulon and Hawk: Jour. Am. Chem. Soc., 1910, xxxii, 1686. IV. Rulon and Hawk: Arch. Int. Med., 1911, vii, 536. V. Hattrem and Hawk: Arch. Int. Med., 1911, vii, 610. VI. Hawk: Arch. Int. Med., 1911, viii, 382. VIII. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 1978. IX. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 1999. X. Mattill and Hawk: Jour. Am. Chem. Soc., 1911, xxxiii, 2019.

NEWER STUDIES AS TO THE NATURE OF COMPLEMENT

Though much has been written on the structure of complement, no good concise review of the subject seems to exist. To those of our readers who are laboratory workers on immunity, and to those who, though not working practically on the subject, try to follow the steps of progress, a brief summary may be of interest.

Buchner[1] had found that the bactericidal power of a serum ("alexin") was inhibited by dialysis, or by dilution with distilled water. Ferrata[2] opened up the subject of the structure of complement by testing the behavior of hemolytic serums under similar conditions, using a 4.5 per cent. glucose or 8.5 per cent. cane sugar solution to prevent mechanical hemolysis by the otherwise hypotonic solution. He found that corpuscles suspended in such sugar solutions fix amboceptor, if present; that is, they become "sensitized." The addition of dialyzed complement does not, however, cause even a trace of hemolysis in the sensitized corpuscles. The

1. Buchner: Ueber den Einfluss von Neutralsalze auf Serum-Alexine, etc., Arch. f. Hyg., 1893, xvii, 138.

2. Ferrata: Die Unwirksamkeit der komplexen Haemolyse in salzfreien Lösungen und ihre Ursache, Berl. klin. Wchnschr., 1907, No. 13.

complement in the serum treated by dialysis has not been destroyed, for the addition of salt completely restores its activity. Dialysis, it seems, causes a separation into two fractions: a portion (globulin) precipitated by dialysis (called by Brand[3] the "middle-piece"), and a soluble fraction (albumin), the "end-piece." These fractions may be separated by filtration. Salt is added, in proper proportions, to the soluble fraction (albumin). The washed precipitate (globulin) is redissolved (*immediately* before use) in salt solution. The addition of either of these fractions alone to sensitized corpuscles (in salt solution) does not produce hemolysis; but, if both be added, the activity of the original complement is entirely restored and complete hemolysis results.

Brand[3] has shown that when sensitized red blood-cells are digested with the redissolved globulin fraction, they fix this fraction, provided that a sufficient amount of hemolytic amboceptor is used in sensitization. Then, if centrifugalized and washed, they are dissolved on addition of the albumin fraction. But, if they be first digested with the albumin fraction and washed, and if the globulin fraction be then added, no solution occurs. Thus, the albumin fraction cannot be fixed by the sensitized cells, nor can the latter be affected by the albumin fraction except through the intermediation of the globulin fraction. Hence Brand called the globulin fraction the "middle-piece" and the albumin fraction the "end-piece," considering the arrangement of the hemolytic constituents to be (red blood-cell)—(amboceptor)—(globulin fraction or middle-piece)—(albumin fraction or end-piece). There is, as a matter of fact, no conclusive evidence that the end-piece is actually fixed under any conditions, even when it is acting, that is, when hemolysis occurs. The two constituents, end-piece and middle-piece, are probably not combined in serum under natural conditions. Fixation of the middle-piece may occur when strongly sensitized cells are digested with whole complement at 0° C. The sensitized cells which have fixed the middle-piece are said to be "per-sensibilized" (Sachs and Bolkowska[4]).

Ferrata finds that the end-piece is destroyed by heating one-half hour at 55 C., but that the middle-piece is thermostabile. The thermostability of the middle-piece has since been disputed[5, 6]; recent work by Marks[6] shows that, when isolated by precipitation and redissolved, it is thermolabile, but when whole serum is heated, it is not destroyed. He also finds that it retains its activity for some time (at least seventeen days) on standing.

The middle-piece is usually present in excess, as compared with end-piece. A great excess may retard hemolysis. An excess of one fraction may apparently, however, partly compensate for a deficiency of the other. The middle-piece is not fixed by red cells which have not been sensitized by amboceptors in sufficient quantity.

Mechanical absorption of complement (e. g., by use of kaolin) removes both fractions completely.[8] Both end-piece and middle-piece are destroyed during or after ordinary hemolysis; this may be due, in part, to an action of the by-products of hemolysis, since much more complement may be destroyed than is necessary for the hemolytic process itself.

In specific complement-fixation reactions, and in the Wassermann reaction, the middle-piece only is fixed; the end-piece is not affected.[8] According to Liefmann and Stutzer,[7] in bacteriolysis, cholera bacilli can be dissolved by end-piece alone; the middle-piece, necessary in hemolysis, plays no part.

There is no evidence from the work thus far done in favor of specificity, or multiplicity of complement, in guinea-pig's serum. Relatively little work has been done with other serums, but as far as it goes, it indicates that their end-piece fractions are relatively very feeble, while their middle-piece fractions are about as active as the middle-piece of guinea-pig serum.

The end-piece is the active constituent of complement. According to the prevailing view, the middle-piece plays a passive rôle, acting as though it were a second, non-specific amboceptor, or sensibilizin. This is in accordance with the postulates of Ehrlich, as elaborated in his side-chain theory, in that complement, or at least one part of it, combines quantitatively with the red corpuscles in the process of hemolysis and is used up, just as is an acid when it combines with a base to form a salt. There are some facts, however, which support the opposing view which assumes that complement acts as a ferment, and is not quantitatively consumed in causing hemolysis.[8] Thus, fixation of the middle-piece cannot be demonstrated if relatively smaller amounts of hemolytic serum are used in sensitization, or if the hemolytic serum is obtained from an immunized goat, instead of from a rabbit. Furthermore, the amount of complement that is actually consumed in the process of hemolysis may be negligible, provided the titration for estimating it is made immediately after hemolysis is complete, and before the anticomplementary substances formed from the broken-up red cells have had time to destroy the complement remaining unused. The question as to the exact mechanism of the action of complement must be regarded, therefore, as still open for investigation.

Though the matter may not have very great practical importance immediately, it introduces an additional complicating factor in all hemolytic work. It is also interesting that, in the Wassermann reaction, the behavior of complement is the same as in the undoubtedly specific complement-fixation reactions.

3. Brand: Ueber das Verhalten der Komplemente bei der Dialyse. Berl. klin. Wchnschr., 1907, No. 34.
4. Sachs and Bolkowska: Beiträge zur Kenntnis der komplexen Konstitution der Komplemente, Ztschr. f. Immunitätsforsch. vii, Orig., 778.
5. Skwirsky: Ueber den Mechanismus der Komplementbindungen, Ztschr. f. Immunitätsforsch., 1910, v, 538.
6. Marks: Complementoid and Resistance of the Mid-Piece of Complement, Jour. Exper. Med., 1911, xiii, 590.
7. Liefmann and Stutzer: Kurze Mitteilung über das bakteriolytische Komplement, Berl. klin. Wchnschr., 1910, xlvii, 1929.
8. Liefmann and Cohn: Das Verhalten des Komplements zu den Amboceptor-beladenen Blutzellen (bei 0° und 37°) III Teil, Ztschr. f. Immunitätsforsch. u. exper. Ther., I Teil, Orig., 1911, xi, 166.

THE APPLICATION OF CHEMOTHERAPY TO CANCER

Of such a fundamental nature is the principle of chemotherapy, as laid down by Ehrlich in his already classical contributions on this subject, that it was at once recognized as probable by all scientists that in this direction would be made our most rapid strides in the curative treatment of disease. It is so definite, so well based, and of such unlimited possibilities that it seemed that for its development to great practical results we had only to wait for the accumulation of experience by a considerable number of bacteriologists, pathologists and organic chemists who might be able to follow out the innumerable lines of investigation offered by this new principle. As this principle is, primarily, that of finding substances which have a greater affinity and toxicity for parasitic cells than they have for the host, it would seem that the more dissimilar and unrelated the parasite and host are, the more readily should "parasitatrope" drugs be found. Conversely, it did not seem probable that such closely related elements as tumor cells would be attacked successfully by this method. It is, therefore, with great surprise that we learn of the remarkably successful experiments of Professor A. Wassermann[1] and his colleagues in the chemotherapy of the experimental tumors of mice.

Starting out with the accidental observation that salts of the rare metals, selenium and tellurium, when in contact with tumors are taken up selectively by the tumor cells themselves, they went to work to devise methods whereby this element might be made to enter tumors in living animals and there exert its toxic effects specifically on the tumor cells. After a long series of trials according to the methods made familiar by the story of the discovery of salvarsan, they succeeded by using a compound of eosin and selenium, the exact nature of which is not disclosed in this preliminary report. Daily injections of this substance in 2.5 mg. doses in 15 gm. mice causes after the third dose a distinct softening of the tumor; by the tenth day, if the tumor is not too large, it will usually be totally resorbed. Sometimes when the tumors are large there occur severe, even fatal intoxications, apparently caused by the rapid absorption of the products of tissue disintegration. The recovered animals have now been observed for months, and when the tumor has totally disappeared under the injections no recurrences have been noted; if insufficient treatment has only partly destroyed the tumor, recurrence is rapid. These experiments have been performed with four different strains of carcinoma and one of sarcoma, all of which seldom, if ever, disappear spontaneously or under the influence of any form of treatment yet tried, except the new eosin-selenium compound. Experiments with two spontaneous tumors of mice also gave complete healing. The authors state that they feel justified, on the basis of the results which they have so far obtained, in making the following statement: "It is possible, by means of a suitable eosin-selenium preparation, administered by way of the blood-stream, to cause tumors actively growing in mice to become softened through disintegration of their cells, to be absorbed, and, when the tumor is not too large in proportion to the body-weight of the animal (up to the size of a cherry), to cause it to heal without recurrence."

In order to prevent premature conclusions, however, they take pains to make the following statement: "This merely establishes an essential scientific fact, namely, that the existing view that it may not be possible to have chemical substances specifically pass out of the vessels into a tumor and destroy it, is untenable. We wish most particularly, in order to prevent false hopes and excitement among persons with tumors, to emphatically point out that at the present time we have no evidence that this substance will act in the same way with human cancers. We have not yet investigated this question. It may well seem not impossible that an essential beginning has been made and a solid foundation established, extension of which along these lines may yield progress in human therapy."

Despite these judicial qualifications one cannot fail to see in this work, conducted by one of the best investigators known in modern medicine, the promise of great things. Whether this particular compound will favorably influence human cancer or not, the results obtained with the mice tumors as already reported constitute one of the most important contributions yet made to cancer research, and no one can doubt that it is a definite step in one of the greatest of human problems. But it must also be realized that, even at the best, it is but the beginning of a long series of most arduous investigations, which must be patiently continued with the least possible distraction by the impatient clamor which will be raised outside the walls of the research laboratory.

1. Wassermann, A., Keysser, Franz, and Wassermann, Michael: Beiträge zum Problem: Geschwülste von der Blutbahn aus therapeutisch zu beeinflussen, Deutsch. med. Wchnschr., 1911, xxxvii, 2389; also discussed in our Berlin Letter of this week.

Current Comment

THE STATE MEDICAL LICENSING BOARD

Far above the necessity of better medical practice laws in this country comes the need for good men to enforce them—for the best available men on our state boards of medical examiners. The members of these boards should be appointed, not for political reasons, but because of their special fitness to conduct examinations and to perform the other duties involved. It is now quite generally known that the only legal barrier which stands between the people of a state and the hordes of ignorant, incompetent and unprincipled "doctors" of this, that or the other "system" of treatment, is the state board of medical examiners. Yet it is astounding to note how few of the states have provided anything like an adequate medical practice act and at the same time have competent men to enforce its provisions. Only a

few states, apparently, have realized how serious is the menace to public health of incompetent doctors; in most states either the needs of the situation have not been realized or else the boards have been used in the building up of political fences. In fact, the chief reason that separate boards have been maintained in several states for different sects in medicine is probably that more places were thereby provided for political favorites. That such conditions have made it impossible properly to protect the people's interests in these matters seems to have been entirely overlooked or ignored. In but few states, also, has anything like adequate provision been made for the support of the board; hence the board must depend entirely on the fees received. In such cases efforts to improve the examinations tend directly to reduce the number of applicants and correspondingly the income of the board. Again, the duties devolving on the boards are by no means easy, and efficient work is sure to be followed by criticisms and revilings if not also by personal damage suits and troublesome litigation. Nor are instances lacking in which the board has been severely criticized by the very ones who should have given it support, so the exceptional instances in which an efficient officer has become discouraged are easy to understand. The many difficulties encountered by a board of medical examiners are well shown in the article appearing in THE JOURNAL this week from Dr. Benjamin K. Hays, on the "Aims, Purposes and Problems of the State Board of Medical Examiners." The men who are doing valiant work on state boards should be given most hearty and ample support, and in all states the boards should be strengthened by the appointment on them of the best men available—and this means men competent to conduct examinations. At the present stage in the development of medical education, efficient boards are particularly important factors. Many of the low-grade colleges which still exist are enabled to do so only because the practice act in that state is inadequate or because it is not properly enforced. In the interests, therefore, of better-trained physicians and better health officers who aim to prevent disease and to promote public health, as well as for a better protection of the public against ignorant and unscrupulous doctors, it is necessary to have, not only good laws, but competent and honest officials to enforce them.

V. 58
1912

THE KEY TO THE SITUATION

In the Medical Economics Department of this issue appears a summary of the Owen bill as it now stands. A careful reading of this abstract will show that the bill will not do any of the things its opponents claim it will do. It does not create a "medical trust;" it does not interfere with the practice of any "healer" in any state; it does not compel any one to take any treatment of any kind. It will simply transfer to a new department three existing bureaus and coordinate their work by bringing them together — a simple matter, and one incapable of doing injury to any one. Why, then, has so much effort been made to prevent its passage? Why have the Homeopaths, the Eclectics, the Osteopaths, the Christian Scientists, the adherents of countless sects, all been duped into believing that this bill affects their interests? Why has the battle-cry of sectarian oppression been raised? Why has a great national organization, claiming 200,000 members, been created to oppose it? Why is an enormous campaign fund being raised to defeat this bill and to defeat for reelection every man in Congress who favors it? Surely there is no danger to any interests in transferring the Public Health and Marine-Hospital Service from the Treasury Department to a new department. Certainly the Division of Vital Statistics is harmful to no one, whether in the Department of Commerce and Labor or in a new department. It is not to oppose these that speakers, press-bureaus and paid agitators are working all over the country. But the Bureau of Chemistry of the Department of Agriculture! That's different! That is the bureau that is headed by Dr. Wiley, who enforces the Food and Drugs Act (when he gets a chance). For years, through political pull and commercial influence, by obstruction and delay, the "patent-medicine," proprietary-medicine and adulterated-food makers and sellers have hampered Dr. Wiley in every way. The recent investigation in Washington proved this. As long as Dr. Wiley is a part of the Agricultural Department, he can be annoyed and hampered. But suppose he were transferred to a new department which was run for the protection of the people and not for the commercial interests? What wouldn't he do to the adulterators, the lying advertisers, the manufacturers who use rotten and filthy material in their products and the men who swindle and cheat the sick? What has been done so far wouldn't be worth mentioning in comparison to what Dr. Wiley and his bureau would do, if it were transferred to a department where he was not and could not be hampered by politics or commercial influence. The men and interests whose fat profits he has affected know this. The influences back of this entire campaign against the Owen bill are advertising agencies and their patrons, the manufacturers of "patent" and proprietary medicines and adulterated food products, who are opposing the passage of any bill that might give Dr. Wiley greater freedom of action. Not daring to fight in the open, they have persuaded the sectarians, the faddists, the Christian Scientists and other enthusiasts that their rights are endangered by a bill which authorizes nothing that does not already exist, which does not increase the power or authority of any officer or employee of the government and which will have no effect on any individual, except to give us all purer food, purer streams and more knowledge. If, by arousing sectarian suspicion and jealousy and by deceiving the people, this bill can be defeated, the dishonest manufacturer and advertising agent will rejoice.

WHY THE OWEN BILL SHOULD PASS

It may, with good reason, be asked: Why, if the Owen bill is so simple and the changes effected by it so slight, is its passage of any great importance to the public? Why should the three bureaus affected be transferred and what advantages will result from the change? These questions are pertinent and timely. Fortunately, the answer is simple. The three departments affected are

the Treasury Department, in which is the Public Health and Marine-Hospital Service; the Department of Commerce and Labor, which includes the Bureau of the Census with its Division of Vital Statistics, and the Department of Agriculture, with its Bureau of Chemistry. The keynote in the management of all three of these departments is material gain, commercial advantage. This is proper. These departments could not and should not be run on any other basis. But, in conserving the health of the people, there is another factor—humanitarianism. The reduction of disease and death will save money, it is true, but it will also save what is far more precious—human lives. The place for the bureaus concerned in life-saving is in a department where humanitarianism is the predominating motive. So long as they are in departments where material, commercial influences prevail, they will be hampered, and to a certain extent nullified! Witness the effort of the Treasury Department to suppress the findings of the Marine-Hospital surgeons in the case of the bubonic plague in San Francisco. Witness the efforts of the Department of Agriculture to hamper and discredit Dr. Wiley. Even in the Department of Commerce and Labor, statistics on iron and steel, coal and copper are more highly esteemed than figures on death and disease. Health activities have no place in departments guided by material considerations. In case of any conflict or objection, the first question asked is: Will this hurt business? The only place for the health work of the government is in a department of its own, where human life will come first, and business considerations will take second place. This is the main reason for the passage of the Owen bill. But this reason is sufficient.

ANOTHER JOINT-STOCK MEDICAL COLLEGE FOR CHICAGO?

During the last seven years at least forty-seven medical schools have closed their doors for lack of funds. It is clear to those engaged in investigation of medical schools that at least eighteen or twenty others are at present on the verge of bankruptcy. Furthermore, in the fifty or sixty leading medical colleges in this country—those doing good work—the cost of training each medical student far exceeds the amount he pays in tuition, the actual cost ranging from $250 to $600 or more each year, although the student pays in tuition fees only from $60 to $200 each year. Most surprising is it, therefore, to receive the announcement of the plan to establish another college on the stock basis, but that its proposed location is that prolific home of medical institutions, Chicago, is not so surprising. It would probably be impossible to establish it anywhere else in this day of enlightenment and advancement in medical education. But of course anything is good enough for Chicago. The circular sent out to solicit stockholders and a faculty announces that the purchaser of twenty shares, at the rate of $20 each, will be "eligible to a professorship," but if he purchases only five shares he will be entitled to a lectureship only. No questions seem to be asked regarding his ability as a teacher, but of course that is of too little importance to need consideration. There is another interesting feature in regard to this proposed medical school. Although the chief complaint coming from all parts of the country during recent years is that the medical curriculum is extremely overcrowded, nevertheless, this new school is to be a "sun-down" affair; that is, it is to run only during the late afternoon and evening. The enterprise apparently has been initiated by a Dr. Frederick A. Leusman, who thus creates and signs himself dean of the new institution. Hats off to the new dean, and the new "sun-down" college! Seriously, five or ten years ago such a proposition might have succeeded; happily conditions have changed.

MORE ENDOWMENT FOR MEDICAL EDUCATION

It is with a sigh of relief that we turn from the preceding comment to note that the advancement of medical education, most remarkable in recent years, is apparently going to be continued. Word has been received that the energetic campaign carried on by Western Reserve University for additional endowment has been successful and that a million dollars has been raised for its medical department. About a year ago Mr. Rockefeller offered to give $250,000 in case the university should raise $750,000 by December 31, 1911. The offer was accepted and work began. The first gift of $250,000 from Mr. H. M. Hanna gave assurance of victory and this was rapidly followed by two other gifts of $100,000 each, one subscription of $50,000, three subscriptions of $30,000, two of $25,000 each and others ranging from $10,000 to $1,000 each. The Medical Department of Western Reserve University has always stood among high-grade medical institutions and the above gifts prove that the people of Cleveland recognize its worth. Where could money be better invested, however, than in the production of better-trained physicians who are to do a most important work in the prevention of disease and the promotion of public health?

A PHYSICIAN PRESIDENT OF CHINA

Dr. Sun Yat Sen, elected president of the Chinese Republic at Nanking, is spoken of as a man of rare genius, who has converted China to democratic ideas. He is a Christian physician, a graduate of an English college in Hong Kong, but has practiced little, having given most of his life to his idea of making China a republic. Whether or not the republic proves to be a lasting one, Dr. Sun has a creditable history thus far, and his confrères in the medical profession can be proud of him.

A COUNTY SOCIETY COOPERATES

The pamphlets which the Association issues containing exposés of medical and medicinal frauds on the public are receiving hearty approval. As has been announced in our advertising pages[1] all this matter has been brought together, elaborated, freely illustrated and, with much additional matter, bound in a book called "Nostrums and Quackery." The problem is to get this book into the hands of the public, a problem that will be easily

1. See advertising page 39 of this issue.

solved if we can have—as we should have—the cooperation of the physicians of the country. We are getting this help to an increasing degree, but we believe not to the extent that we should get it if the facts were more generally known. One of the most encouraging incidents that has occurred in connection with the distribution of "Nostrums and Quackery" is the action of the Los Angeles County Medical Association. This society has presented one of these books to each of its 570 members. We have no doubt that the great majority of the physicians of Los Angeles now have this book lying in their reception rooms where it is likely to be picked up by waiting patients who will thus be interested and enlightened. It would be decidedly helpful if all the large county societies were to follow the example which the Los Angeles County Medical Association has so admirably set.

RETIREMENT OF DR. SHATTUCK

Dr. George B. Shattuck has retired from the active editorial management of the *Boston Medical and Surgical Journal* after a service of thirty-one years. That periodical was issued under its present name first in February, 1828, and has always been maintained with dignity and as one of the high-class medical journals of the country, and under the long editorial service of Dr. Shattuck it has improved constantly and prospered accordingly.

V. 58
1912

Medical News

COLORADO

Hospital Saturday and Sunday Receipts.—The Hospital Saturday and Sunday Association of Denver received about $6,000 from its annual collection.

Deficit Made Good.—The Trustees of the National Jewish Hospital for Consumptives, Denver, have made up the deficit of $70,000, discovered after the death of the secretary in August last.

State Hospital Overcrowded.—The State Lunacy Board declares that the State Hospital for the Insane, Pueblo, is too overcrowded to receive the 100 insane patients now in Denver County Hospital.

Liquor License Required.—The internal revenue department has ordered the hospitals of Denver to take out liquor dealers' licenses as the result of the discovery that most patients are charged by itemized statement for liquors used.

Special Course in Ophthalmology.—The first special course in ophthalmology to be given by the University of Colorado, Denver, will begin June 23 and extend to August 2. The instruction will be open to all graduates of accredited medical colleges. Those desiring to take a degree, will be required to show one year of work in an eye clinic, besides a certain amount of mathematics and physical optics and an acquaintance with ophthalmologic literature, and must pass a satisfactory examination.

ILLINOIS

Personal.—Dr. Thomas W. Curry, Streator, has returned from Europe.——Dr. Charles Handley, Brocton, is said to have been adjudged insane.——Dr. Frank D. Rich has been elected president of the Joliet Antituberculosis Society.

Underground Emergency Hospital.—The first underground emergency hospital in Illinois was opened New Year's day in one of the mines in the Collinsville district. The hospital is built in the heart of the mine; its concrete walls are guaranteed against cave-ins and small explosions, and the hospital is fitted to care for such emergency cases as may occur in the mine.

Donation to State Society.—Dr. J. Palmer Matthews, Carlinville, has presented to the Illinois State Medical Society a file of the journal of that society, collected by his father beginning from the time of the Chicago fire, and also a picture of the members of the society taken immediately after the fire. This collection has been shipped to Springfield and will be placed in the Lincoln Library.

Chicago

Personal.—Dr. and Mrs. Roger T. Vaughan sailed for Europe, December 16.——Dr. Clara Dunn, physician at the Cook County Hospital for the Insane, Dunning, who was suspended under the charge of insubordination in October last, was ordered reinstated, January 4.——Memorial services for the late Dr. Hugh Blake Williams were held January 4 at the Press Club.

Ferguson Memorial Meeting.—The Chicago Medical Society proposes to hold a memorial meeting February 7 in honor of the late Dr. Alexander Hugh Ferguson. Dr. Joseph M. Patton will preside and Dr. Andrew McDermid will speak of "Undergraduate Life and Early Medical History;" Dr. Albert J. Ochsner on "Dr. Ferguson's Place in Surgery;" and Dr. Edward F. Wells on "Ferguson the Man."

Health of the Year.—The death-rate of Chicago during 1911 is reported to have been 14.55 per 1,000. The total deaths amounted to 32,672, 40 per cent. of which were due to preventable diseases. The deaths from these causes are more than 1,600 lower than the previous year. Pneumonia led the list of death causes, with 4,929; tuberculosis came second, with 3,726. Typhoid fever reached the lowest mark ever attained in the city, and is now 93 per cent. lower than it was twenty years ago. There was also a marked reduction in the deaths from diarrheal diseases in children under 2 years of age. The agencies which have aided to bring about this decrease are the educational work of the Department of Health, the Infant Welfare Service and the more general use of a safe milk-supply. Among the newer activities of the department is the educational exhibit, which has been seen and studied approximately by a million people. In the division of medical school inspection, 73,405 pupils were examined, and of these 31,240, or 42.6 per cent., were found defective. The principal defects noted were as follows: defective teeth, 27,676; hypertrophied tonsils, 15,097; defective vision, 11,524; enlarged glands, 11,459; adenoids, 3,465, and defective hearing, 959. The school nurses made a total of 90,249 visits and cared for 562,570 children. In the sanitary bureau 5,500 more plumbing inspections were made than during the previous year. A total of 1,043,456 were given baths at seventeen public free baths and 71,410 men were lodged in the municipal lodging-house. During the year, 113,079 examinations were made in the laboratory, of which 65,023 were bacteriologic and 48,056 chemical. There was a large increase in the number of rabies specimens sent in and an increase of 60 per cent. in the number of sanitary water analyses.

INDIANA

The Knabe Mystery.—The mystery connected with the death of Dr. Helene Knabe, Indianapolis, October 23, has not been solved and the coroner on December 29 filed his verdict that Dr. Knabe was murdered by a person or persons unknown.

Personal.—Dr. Frederick Nussel, Brazil, who has been ill in an Indianapolis hospital with ptomain poisoning, has recovered.——Dr. A. B. Mercer, Alexandria, is reported to be seriously ill.——Dr. Charles W. Stolzer, New Albany, has succeeded Dr. James W. Baxter, New Albany, resigned, as secretary of the Floyd County Medical Society.

Leprosy in Indiana.—Dr. Nelson D. Brayton has diagnosed a case of leprosy in Indianapolis; Dr. A. W. Brayton concurs in the diagnosis. The clinical examination was supplemented by several bacteriologic examinations. The patient, a colored woman, noticed blotches on her face, arms and legs one year ago and consulted a physician who treated her for lichen planus. Nodules first appeared on the face, arms and ears about three months ago. The source of her contagion cannot be determined; none of her relatives has the disease. She was born in Tennessee and has never been south of Chattanooga, where she visited once, nor north of Chicago, where she attended the World's Fair. She recently moved from Tennessee to Indianapolis. The city health authorities will isolate and care for the patient, but what final disposition will be made of the patient is not yet determined. This disease is not regarded as highly contagious and no alarm seems to be felt by the public over this case.

MARYLAND

Personal.—Dr. Bennett F. Bussey, Texas, has been appointed physician of the Baltimore County Almshouse, and Dr. Josephus A. Wright jail physician.——Dr. H. D. Purdom, chief resident physician at Bay View Hospital, has been appointed assistant physician and pathologist to the Springfield Hospital for the Insane, Sykesville.

For the Health of Maryland.—At the annual meeting of the Dorchester County Medical Society held in Cambridge, December 11, the governor-elect and a number of members of the legislature were told of the legislation which physicians of the state hope to have passed at the coming session. They will be asked to pass a bill authorizing the establishment of a medical laboratory in every county of the state and the appointment of a county health officer who is a trained pathologist. These officials will be required to make examinations of water and milk and to assist the local profession in making diagnoses of diseases.

Baltimore

Munich Physician in Baltimore.—Dr. Erwin Erhardt of the University of Munich is visiting Baltimore to study the methods of treating cancer. It is said that he intends to establish a special hospital for the treatment of that disease in Munich.

Health Department Banquet.—At the eleventh annual banquet of the employees of the health department, December 28, Dr. James Bosly, health commissioner, the mayor, the presidents of the first and second branches of the city council, and the comptroller were the guests of honor. Dr. William R. Stokes was toastmaster.

Personal.—Dr. Howard A. Kelly, who has been ill with typhoid fever, is now well on the road to recovery.——Dr. Harry Friedenwald, president of the Federation of American Zionists, who returned recently from Palestine, delivered an illustrated lecture, December 17.——Dr. John E. O'Neill has been appointed superintendent of the municipal tuberculosis dispensary system, to be conducted under the city health department, for which an appropriation of $6,000 has been made.——Dr. Warren P. Morrow, superintendent of the Sydenham Municipal Hospital for Infectious Diseases, has resigned to become superintendent of the Winnipeg (Man.) General Hospital, and has been succeeded by Dr. Robert A. Warner, formerly health warden.——Dr. William S. Baer is reported to be ill in the Union Protestant Infirmary.——Dr. Robert L. Keyser has been appointed coroner of the Eastern District, vice Dr. Thomas Sudler, deceased.

MICHIGAN

Office Building for Physicians.—The George Metz Building, Grand Rapids, which is nearing completion, is to be devoted entirely to physicians and dentists.

New Hospital Opened.—The new hospital for contagious diseases, Bay City, was formally opened for inspection, December 12. The institution has a modern equipment and can accommodate fifty patients.

Sanatorium for Jackson.—At a meeting of the Jackson Antituberculosis Society, it was decided to raise $10,000 to provide for the erection of a sanatorium for advanced cases of tuberculosis. Mr. John R. Bailey was elected secretary of the society, vice Dr. Henry D. Obert, resigned.

Milk Ordinance.—There has arisen a slight milk war in Kalamazoo, following the presentation of a drastic milk ordinance of the city council by the mayor, after he had visited cities which are attempting to furnish clean milk. The health board is able, thanks to the backing of the mayor, to exclude milkmen whose product does not come up to the requirement.

MINNESOTA

The Tuberculosis Situation in Minnesota.—At a meeting of the Minnesota Association for the Prevention and Relief of Tuberculosis, held in St. Paul, December 15, with delegates present from forty-five counties in the state, resolutions were passed setting forth that all advanced cases of this disease should be provided with beds in state-aided institutions; that these asylums should be near the homes of the people and should consequently be very numerous; that they should be maintained by the counties, municipalities or districts liberally assisted by funds from the state, and under state supervision and control; that every state-aided institution should maintain a free dispensary and have visiting nurses on its staff; that the state sanatorium should be completed by the addition of kitchen, laundry, dining-room, amusement hall and employees' home; that it should be enlarged from year to year until it can accommodate as many incipient cases as the county institutions desire to transfer to it; that registration of all cases be enforced; that a state lecturer on tuberculosis be provided for to carry on an active campaign of education throughout the state; that milk from herds not tested with tuberculin should not be sold, and that open-air schools should be provided in the cities for weakly and anemic children.

MISSOURI

Money for Nurses' Home.—A. R. Levering, who gave $35,000 to found the Levering Hospital, Hannibal, has placed an additional sum of $7,500 at the disposal of the board of control to be used for erecting a home for nurses.

Personal.—Dr. Samuel G. Meredith, Cowgill, is reported to be seriously ill with a chronic disease.——Dr. and Mrs. Adolf L. Korn, Carthage, have returned from Europe.——Dr. William B. DeJarnett, Columbia, is reported to be ill in his rooms with contagious disease.

NEW YORK

Large Contributions to Antituberculosis Crusade.—The National Association for the Study and Prevention of Tuberculosis and the State Charities Aid Association which in connection with the State Department of Health is conducting the campaign against tuberculosis in this state has issued a statement saying that during the past year $3,550,000 has been appropriated from public funds and donated by private charities to the various antituberculosis activities in the state.

Personal.—Dr. John M. Swan has resigned as medical director of the Glens Springs, Watkins.——Dr. Christiana M. Greene has been appointed assistant medical school examiner of Buffalo.——Dr. Earl G. Danser, Buffalo, has been reappointed medical examiner of Erie County and Dr. George B. Stocker, Buffalo, as deputy.——Dr. James W. May has assumed his duties as head of the State Lunacy Board.——Dr. O. Howard Cobb, assistant superintendent of the New York State Hospital for Crippled and Deformed Children, West Haverstraw, has been appointed superintendent of the Syracuse State Institution for Feeble-Minded Children to succeed Dr. James C. Carson, Syracuse, resigned.

New York City

Harvey Society Lecture.—The seventh in the present course of Harvey Society lectures will be given in the New York Academy of Medicine on January 20, by Prof. Henry Fairfield Osborn of Columbia University on "Unit Characters in Heredity as They Appear to a Paleontologist."

Herter Foundation Lectures.—Dr. Ludvig Hektoen of the University of Chicago delivered the six Herter Foundation lectures under the auspices of the University and Bellevue Hospital Medical College at the Carnegie Library, at 4 o'clock in the afternoon, from January 8 to 13, inclusive. The subject of the lectures was "Immunity."

Forbids Use of Common Towel.—Commissioner Lederle has announced that the Board of Health adopted a resolution at its meeting on January 5 amending the Sanitary Code to forbid the use of the common towel in railroad stations, ferry houses, schools, hotels, theaters, concert halls, dance halls, department stores, cafes, restaurants and saloons.

Personal.—Dr. Philip F. O'Hanlon, Manhattan, who was operated on for pelvic abscess, December 29, is reported to be making satisfactory progress toward recovery.——Dr. Patrick H. Bumster, Long Island City, was seriously injured when his automobile skidded across an ice-covered pavement, January 1, and collided with an iron trolley pole.——Dr. Charles F. Pabst, an intern in the Brooklyn Hospital, was presented with a set of instruments and a medical case by his associates in the hospital at a dinner given in his honor, December 30.

New York's Record Year.—The year 1911 has been the healthiest in the history of the city. There were 40,000 fewer cases of illness in the city during 1911 than during 1910. The death-rate for the year 1910 was 15.98 per 1,000 which was thought to be so low as to be irreducible, but that for 1911 was 15.13. Fifteen cases of small-pox occurred during the year, eleven of them during November and December, and 103,644 persons were vaccinated, one-third of them during the month of December. The case fatality in diphtheria has been reduced from 10.3 per cent. in 1910 to 9.5 in 1911. There has been a decrease in the infant death-rate of 10 per cent. over that of 1910. The department of health plans extension work for the coming year which will consist in the enforcement of pasteurization of all milk not certified or used for

cooking; the further extension of hospital facilities for infectious diseases; the establishment of 40 milk stations provided for in the budget of 1912; the establishment of five clinics for children; and the sanitary control of venereal diseases.

Death Toll From Street Accidents Increases.—Vehicular traffic was responsible for the death of 423 persons and the injury of 2,004 others in this city during 1911 according to the report of the National Highways Protective Association. This is an increase of 13 per cent. over the fatalities of 1910. There was, however, a decrease of 7 per cent. in the number of children killed as compared with the record of 1910. The association will endeavor to have the legislature pass a constitutional measure fixing the responsibility of chauffeurs and drivers. During 1911 there were eighty-eight persons killed and 108 injured at grade crossings in New York and efforts are being made to eliminate these crossings as fast as possible.

PENNSYLVANIA

Addition to County Hospital.—There has recently been completed another building in connection with the Lancaster County Hospital, to be known as the Hospital for Communicable Diseases. This new building is 100 feet long by 30 feet wide, is one story high and is built of brick with limestone trimming. There are six rooms for patients, so constructed that the rooms do not communicate and each room accommodates two persons. In addition there is a fully equipped diet kitchen, doctors' gown rooms, patients' bath and doctors' wash rooms.

Officrs Elected.—Montgomery County Medical Society has elected the following officers: president, Dr. George F. Hartman, Port Kennedy; vice-presidents, Drs. Joel D. Brown, Oaks, and Herbert A. Arnold, Ardmore; secretary, Dr. Harry H. Whitcomb, Norristown; corresponding secretary, Dr. Edgar S. Buyers, Norristown, and treasurer, Dr. Frank C. Parker, Norristown.——At the annual meeting of the Lancaster City and County Medical Society, January 3, the following officers were elected: president, Dr. Thaddeus M. Rohrer, Quarryville; vice-presidents, Drs. Lewis M. Bryson, Paradise, and Adam V. Walter, Brownstown; secretary, Dr. Horace C. Kinser, Lancaster, and treasurer, Dr. Theodore B. Appel, Lancaster.

Philadelphia

Personal.—Dr. William W. Keen has been reelected president of the Philosophical Society.——Dr. Richard H. Harte presented on behalf of the donors, a portrait of the late Dr. John Ashhurst, Jr., to the College of Physicians, January 3.

Open-Air School Established.—The first open-air school in the city has been opened at the Wilson School, Twelfth and Federal Streets, and the sickly children taught there are not only learning their lessons faster than they did in classrooms, but are gaining in weight. The school is being carefully watched by Dr. Walter S. Cornell, medical inspector of schools. There are frequent intervals for rest and lunch is served at noon every day.

Charity Agent Appointed.—Mrs. Lawrence Lewis has just received an appointment from the city as a special agent in the department of health and charities. Mrs. Lewis is giving her services gratuitously and will begin a systematic study of the family conditions of patients who are sent to the Philadelphia Hospital and who go to the almshouse. The aim of the work is to ascertain the status of those families applying to the city for and to discover the validity of their claim on the city's charity.

Clinic's Quarters Inadequate.—The Philadelphia Chest and Throat Clinic has made an appeal for funds to enlarge its building at 2114 Lombard Street. Here more than 700 patients have been treated for consumption, pneumonia, bronchitis and other chest diseases in the last two years and these patients made nearly 6,000 return visits. No charge is made for treatment and medicines are furnished at a nominal cost. To purchase the two sites adjoining the present building $25,000 is needed, and of this $9,000 has been pledged.

New Officers of College of Physicians.—The following officers and elective committees were chosen, January 3, by the College of Physicians of Philadelphia: president, Dr. George E. de Schweinitz; vice-president, Dr. James C. Wilson; censors, Drs. Richard A. Cleeman, S. Weir Mitchell, Arthur V. Meigs, James Tyson; secretary, Dr. Thomas R. Neilson; treasurer, Dr. Richard H. Harte; honorary librarian, Dr. Frederick P. Henry; councilors, Drs. Robert G. LeConte, David Riesman; committee of publication, Drs. Gwilym G. Davis, Thompson S. Westcott, William Zentmayer; library committee, Drs. William J. Taylor, S. Weir Mitchell, Francis R. Packard, George W. Norris, Astley P. C. Ashhurst; committee on Muetter Museum, Drs. George McClellan, Henry Morris, George P. Muller; hall committee, Drs. John K. Mitchell, Thomas H. Fenton, Alexander Randall, E. Hollingsworth Siter, J. Norman Henry; and committee on Directory for Nurses, Drs. Thomas G. Ashton, Frederick Fraley and John H. Gibbon.

GENERAL

New Officers for Bio-Chemists.—At the final meeting of the American Society of Bio-Chemists, held in Baltimore, the following officers were elected: president, Dr. Archibald B. Macallum, Toronto, University of Toronto; secretary, Dr. A. N. Richards, University of Pennsylvania; treasurer, Dr. Walter Jones, Johns Hopkins University, and councilors, Drs. Max L. Mendel, Yale, and H. Gordon Wells, University of Chicago.

Urologists to Meet in St. Louis.—There will be a meeting of the North Central Branch of the American Urological Association in St. Louis, February 5-7. The St. Louis urologists are hoping for a large attendance and are desirous that the invitations reach all who are interested in uro-genital diseases, whether specializing or not. The St. Louis members will entertain the association on the first evening with a dinner and a vaudeville entertainment at the Jefferson Hotel, which will be headquarters.

The New Surgeon-General.—The president has selected Dr. Rupert Blue as successor to the late Walter Wyman as surgeon-general of the Public Health and Marine-Hospital Service of the United States and his nomination was sent to the senate January 9. Dr. Blue was born in South Carolina in 1868 and was graduated from the University of Maryland in 1892. He became an intern in the United States Marine-Hospital Service in 1892 and was commissioned assistant surgeon on March 3, 1893. He became a passed assistant surgeon four years later and was made surgeon May 1, 1909. For the first eight years after Dr. Blue entered the service, he performed the usual service duties at various points in the United States. In 1903-4 he was detailed as executive under Surgeon Joseph H. White, who was in charge of the operations in eradicating bubonic plague in San Francisco, and there proved his ability as an executive officer. In 1905 he was detailed as a district officer during the yellow fever epidemic in New Orleans, and in 1907 served as director of sanitation at the Jamestown exposition and here again showed his ability as an organizer and executive officer by reconciling the divers interests at the exposition and making its sanitation a pronounced success. From Jamestown he went again to San Francisco, where he was placed in charge of the city and again rendered excellent service in the work against bubonic plague and here as before handled the situation admirably, avoiding friction and working in excellent accord with the municipal and state authorities. Dr. Blue's strong points have always been in preventive medicine and quarantine, rather than in the details of hospital service. He recently made a tour of inspection of Europe, in which he studied especially the question of emigration and quarantine management and while abroad he attended a course of lectures at, and graduated from, the London School of Tropical Medicine. Afterward he made a tour of South America, in which he studied the possibility and routes of importation of bubonic plague and yellow fever from these countries. His last detail was at Honolulu, from which he was recalled to Washington, when the question of the successorship to the surgeon-general became prominent. Dr. Blue has an engaging personality, is an excellent executive officer, a good organizer and has to a marked degree the faculty of making friends and of reconciling opposing interests.

FOREIGN

The Sudden Deaths at the Berlin Municipal Shelter.—The cable has reported the mysterious sudden death of a number of men at the municipal shelter at Berlin. Still later dispatches from Paris state that a number of vagrants have died under similar conditions at Leipsic, Hamburg and Milan, Italy, and the International Sanitary Commission has been asked for an official report on the subject. At Berlin the outbreak was thought to be due either to drinking wood alcohol or to ptomain poisoning, in the absence of other discoverable cause, but no scientific report has yet been received. The cable dispatches have reported over a hundred as dying rapidly during forty-eight hours among the 4,000 men gathered in the big municipal shelter.

Seventieth Birthday of Prof. R. Lépine of Lyons.—Raphael Lépine comes of a family with professional traditions in medicine and law, and his son has already entered on his

V. 58
1912

medical career, while his brother is the well-known prefect of police at Paris. Lépine was *agrégé* professor of clinical medicine at Paris until called to the corresponding chair at Lyons in 1877. He has been one of the most prolific writers in France on clinical medicine and cortical localization. In 1877 he founded the *Revue Mensuelle* which in 1881 split up into the *Revue de Médecine* and *Revue de Chirurgie*. On the occasion of his seventieth birthday recently 112 of his pupils contributed articles to make the *Revue de Médecine* a festival number in his honor, which has just been issued.

Dismissal of the Chief of the Public Health Service in Denmark.—The profession in Denmark has been much exasperated by the summary dismissal of the able and efficient chief of the national public health service, Dr. N. Muus. One of his subordinates, Etatsraad Hoff, has been appointed to his place by the *justits-minister* who is the authority in the matter. His complaint against Muus is that he tried to shield a drinking confrère, Dr. Langhoff, and did not dismiss this confrère, who was a district physician. Muus explained that the statements made to him in regard to the drinking habits of the accused were only hearsay and came from persons connected with the administration of a local asylum who were prejudiced against Langhoff on account of reforms he had introduced in the asylum. The agitation is all traceable to a sensational onslaught made on the medical profession nearly a year ago by an editor, Reventlow, who stated that many of the members of the profession were addicted to morphin and alcohol, and later cited Langhoff's case in particular. Notwithstanding the sensation caused all over the country by the attack, no one presented any further evidence as to the truth of Reventlow's assertions, and he was forced to acknowledge that he did not know of any morphinist among the medical men in his part of the country. The medical societies have passed resolutions of protest against the dismissal of Muus, and the minister had to answer for his action before parliament, but a resolution to have the matter further investigated was finally voted down by a small majority.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Dec. 30, 1911.

The National Insurance Bill

The hostility of the profession against the national insurance bill is near an acute crisis. At several large meetings members of the council of the British Medical Association who made attempts to defend or explain the action of the council were refused a hearing.

As often happens, however, when public feeling is deeply aroused and practically unanimously expressed the demonstrators were seriously mistaken. It is not the council or even the representatives of the British Medical Association which are at fault but the rank and file of the profession; those who are blaming others are themselves responsible. This is clearly shown in a letter published in the *Times* by Sir Victor Horsley and two other members of the council of the association, in which he gives the points he was prevented from bringing before a meeting. In dealing with the insurance bill the council was not responsible for the policy and public administration of the association. Ten years ago, largely on the initiative of Sir Victor Horsley himself, the association was completely democratized and reconstructed on a representative basis. The whole of the policy and public administration is in the hands of representatives who are elected by divisions all over the empire and form the representative body (numbering about 170) and similar to the House of Delegates of the American Medical Association. They determine every important step taken by the association and instruct the council, whose functions are therefore merely executive. That the council has faithfully executed its duties is shown by the following minute of the last representative meeting. "That the representative body expresses its grateful appreciation of the great services rendered by the council in connection with the national insurance bill." A second error is the statement that it was originally determined that the six points of the association should be included in the bill. The representative body instructed the council to consider what points should be secured if possible by specific provisions in the bill and what points should be kept open to be determined by the insurance commissioners. As a matter of fact, the association obtained the insertion in the bill of four of the six points and two have been kept open for negotiation with the insurance commissioners. A third error is that it had been originally determined that the wage limit and amount and method of remuneration should be stated and included in the bill and that the council was responsible for this not being done. This is not a fact. These points were considered at great length at the representative meetings and it was resolved that the council be instructed to use its best endeavors to have the $500 a year limit fixed by the bill with provision for a lower limit to be fixed locally, but failing this to obtain as best they could the fixation of the $500 as a maximum limit with such local option. Similarly the representative body decided that the rate and method of remuneration should be settled in each district by the local medical committee in negotiating with the local insurance committee. The representative body found it impossible to fix either a flat rate or a common method of remuneration. As no unanimity existed in the profession on these points the representatives felt that no fixed rates or methods of payment could be imposed by the bill. The representative body, however, informed the Chancellor of the Exchequer that a $1.25 capitation rate proposed was inadequate.

The rank and file of the profession has suddenly awakened to the view that the best policy is to refuse to work the act and not to attempt to obtain by regulation what it has failed to get by regulation. It made a mistake in not giving this mandate to its representatives in the first instance. Somebody must be whacked for the mistake and it has selected the council. The sanction of the appointment of their medical secretary under the bill has facilitated this operation. For this certainly the council is responsible. But, as shown in my last letter, it had good reasons.

Warning Against Improper Medical Certificates

The General Medical Council has issued a warning against the irregular issue of medical certificates. It appears that some doctors have given untrue, misleading or improper certificates of various kinds. Under this heading the council places certificates relating to the dead or the disposal of the dead, those under the lunacy, vaccination and factory acts, those in relation to children or excusing school attendance, in connection with certain friendly societies, workmen's compensation and naval and merchant shipping for the procuring of the issue of foreign office passports and for excusing attendance in courts of law, in the public service or in ordinary employment. Any physician who shall be known to have given any untrue, misleading or improper certificate, whether relative to the above or otherwise, is liable to be adjudged guilty of infamous conduct in a professional respect and to have his name erased from the register.

Tropical Disease Research

The Liverpool School of Tropical Medicine has decided to send Dr. Harold Seidelin, scientific secretary to the Yellow Fever Bureau, associated with the school, to conduct some new and important researches into the disease at Yucatan, Mexico. This is the twenty-eighth expedition connected with the school.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Dec. 22, 1911.

Appeal of the Five Suspended Students.

The five medical students who were suspended for three and six months for participation in the riots in Professor Nicolas' classes have decided to carry an appeal to the Superior Council of Public Instruction, on the ground that they have been punished already by the closing of the school, are liable to prosecution in the police courts, and should not be subjected to an indefinite number of punishments for the same offense.

Death of Dr. Paul Topinard

Anthropologic science has just lost one of its most illustrious representatives, Dr. Paul Topinard. He was born on Isle-Adam in 1830. When 9 years old, he went with his father to the United States. He received his early education in New Orleans, and at the age of 17 returned to France to study medicine. He became intern, and, in 1860, physician of the hospitals. He practiced in Paris until 1871. His teacher Broca, whose collaborator he became, held him in special affection, and caused him to be appointed curator of the collections of the Société d'anthropologie, then adjunct director of the laboratory of the Ecole des Hautes Etudes. In 1876 he was appointed professor at the Ecole d'anthropologie, and in 1880, at the death of Broca, he succeeded the latter as general secretary of the Société d'anthropologie and assumed the direction of the *Revue d'anthropologie*.

Topinard was known especially for his researches on the human races, on cranial capacity, and on the standardization of cranial measurements, and for his book on anthropology, which was translated into several languages. In 1901 he published a work called "Anthropology and the Social Sciences," in which he studied the animal societies and the earliest associations of human beings.

Death of Dr. Bornet.

Dr. E. Bornet, member of the Académie des sciences de Paris, has just died. He had acquired great reputation in the scientific world, especially by his work on cryptogamy, and he was for a long time considered one of the most eminent botanists of France. He was elected a member of the Académie des sciences in 1886 and belonged to the greater number of the foreign academies and had within recent years been elected member of the Royal Society of London.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Dec. 21, 1911.

Personal

Professor v. Franqué of Giessen has received a call to the chair of gynecology at Bonn as the successor of Professor Fritsch.

Regierungsrat Dr. Weber, who aided in the scientific organization of the Dresden International Hygiene Exposition, has been appointed director of the imperial health office (*Gesundheitsamt*) to succeed Professor Uhlenhuth, who is at present director of the hygienic institute at Strasburg.

Treatment of Cancer from New Standpoint

December 20, Prof. A. von Wassermann delivered an address in the Berlin medical society (*Medizinische Gesellschaft*), which dealt with the problem of exerting a therapeutic influence on tumors by way of the blood. At the same time, he published an extensive article on this subject in No. 51 of the *Deutsche medizinische Wochenschrift*, from which I extract the following extraordinarily interesting statements. In order to determine in his experiments whether carcinoma cells, removed by operation, could live longer in the blood of cancer patients than in the blood-serum of healthy persons, sodium tellurate and sodium selenate, salts first suggested for that purpose by Gosio, six years ago, were employed as indicators to show whether the carcinoma cells had retained their vitality or not; these salts have the special property of becoming reduced to a metallic form in the presence of living cells, and precipitating as a blackish or red sediment. By these experiments, it was shown that the reduction occurred in both the normal and the cancer blood-serum, so that the normal serum had not destroyed the tumor cells; but it was also shown, as the most remarkable result, that selenium and tellurium were precipitated only on the carcinoma cells themselves. The presumption that this peculiar observation was to be referred to a specially close relation between the tumor cells and the selenium and tellurium salts, was confirmed on living mice affected with carcinoma. Solutions of these salts were injected locally into the tumors. Thereupon, it was shown that a softening and liquefaction of the tumors occurred and the conclusion might be drawn from this that in selenium and tellurium, substances had been found which destroyed tumor cells as soon as they reached them.

The next problem consisted, not in injecting these salts directly into the tumor, because the prospects of healing a tumor by local treatment are extraordinarily slight; the possibility of reaching all of the tumor cells in this way seems almost hopeless, while on the other hand, a further growth takes place if only a few of the tumor cells remain alive. The problem of introducing selenium and tellurium into a tumor and saturating it with these bodies, can be solved only by the use of such chemical preparations as distribute themselves rapidly in the living organism and are diffusible. Mouse carcinoma, especially, is a very poorly vascularized tissue. For this reason von Wassermann selected as a transporting agent for the selenium and tellurium, dyes of the fluorescein group, of which he knew, from experiments which he had made some fifteen years ago with Ehrlich, that after injection into the circulation they distribute themselves very rapidly, even in such poorly vascularized tissues as the cornea and the aqueous humor.

After many painstaking experiments with hundreds of preparations, Wassermann obtained a preparation consisting of a compound of eosin and selenium which, however, it is claimed, needs careful chemical treatment for the development of its full activity. This substance is easily soluble in water. Healthy mice, averaging 15 gm. in weight, will tolerate 2.5 mg. of this substance injected into the caudal vein. As the most striking symptom there appears immediately an unusual reddening of the entire animal, which appears before the end of the injection and becoming more marked, causes the snout, the eyes and the paws to take on a lively red color. If, however, this amount is injected into a mouse affected with a tumor, there appears after the first two injections, which are made on successive days, scarcely any change. After the third injection palpation shows a marked softening of the tumor. This softening is still more marked after the fourth injection, so that there is no longer the feeling of a solid tumor, but rather that of a fluctuating cyst. Provided that the preparation is chemically good, there occurs after the third and especially after the fourth injection an absorption of the liquefied tumor content. The soft fluctuating sac becomes smaller, the tumor capsule becomes lax, being too large for its contents, and in moderately large tumors the configuration of a circumscribed tumor can no longer be distinguished, but only a long edematous cord can be felt. As the result of the fifth and sixth injections in favorable cases, the absorption and diminution proceed so that one gets the feeling of an empty sac, and in case no intercurrent disease occurs, the last remnant is absorbed and the animal is cured in about ten days with a disappearance of all remnants of the tumor. However, this undisturbed smooth healing does not always take place; with large tumors of the size of a plum and with those in which the liquefaction and softening of the contents take place very quickly the animals frequently become severely ill, feel cold and perish. This occurrence is so frequent and regular that there can be no doubt that this illness is connected with the absorption of the liquefied tumor contents. The animals in such cases succumb to the toxic action of material absorbed from their own tumors. With reference to recurrences in the healed animals, Wassermann has kept such animals for months without observing any sign of recurrence. It is important that all the tumor cells are actually destroyed. If a necropsy is made on a mouse in the stage at which the tumor is softened and gives the feel of a liquid, the tumor which ordinarily appears solid and of a grayish-white color is colored an intense red in marked contrast to the colorless or only slightly tinged surroundings. Thus it is seen that the remedy has been deposited selectively in the tumor, indicating a pronounced affinity of the remedy for the tumor cells. In mice in which there is the feeling of an empty sac in place of the previous tumor, there is found macroscopically a bacon-like detritus which has no resemblance to cancer tissue. Such a curative action is obtained with a good preparation in from eight to ten days. The next step was to determine whether mice whose tumors were not caused by inoculation, but which had become spontaneously affected with carcinoma, would be influenced by the preparation in a similar way. Two mice, one of which had a spontaneous tumor the size of a hazelnut and the other one the size of a plum, were cured; one of them is still living nearly three months after treatment, without any recurrence; the other died fourteen days after the cure, and at the necropsy no trace of the tumor structure could be found macroscopically.

On the basis of all these facts, Wassermann believes that he is justified in asserting that it is possible by means of a properly prepared eosin-selenium preparation, introduced by way of the circulation, to cure without recurrence fully developed tumors in mice, by the destruction of their cells with softening and absorption of the material, provided that the tumors have not already attained too large a size compared with the body weight (not larger than a cherry). With justifiable caution, however, Wassermann concludes with the warning that for the present we have no reason to believe that this remedy will act in a similar way on human beings affected with tumors. He has not investigated this question closely, but he is of the opinion that it does not appear impossible that by further work in the same direction progress may be made in human therapy. Wassermann's communication, which was received with great interest, was illustrated with very instructive drawings. It was also supported by the explanations included in the address made by Professor von Hansemann, who from the beginning carried out the anatomic investigation of the mice under treatment and at the necropsy. According to him, the eosin-selenium has a destructive action on the nuclei of the tumor cells, and thus the tumor breaks up into a detritus which is absorbed without residue. The remaining normal tissues of the body, according to the investigations of Hansemann, are not affected by the remedy. [This subject is commented on editorially in this issue.—ED.]

Marriages

EDWIN MORENHOUT CLINTON, M.D., Soldiers' Home, Sawtelle, Cal., to Miss Etta P. Middleton of Venice, Cal., at Soldiers' Home, December 25.

DAVID ARTHUR SIMS, M.D., Fort Smith, Ark., to Mrs. Grace Rickard of St. Joseph, Mo., at Jacksonville, Fla., December 19.

FRANCIS RUDOLPH SILVER, M.D., Belmont, Boston, to Miss Mary Josephine Torpy of Everett, Mass., December 25.

CHARLES R. MOWERY, M.D., Wallace, Ida., to Miss Doris Mathewson of Spokane, Wash., December 25.

FLOYD B. MCBRIDE, M.D., Libertyville, Kan., to Miss Ivy Witham of Cherryvale, Kan., December 27.

CHARLES KIRTLEY BECK, M.D., to Miss Eugenie Jewell Carson, both of Louisville, Ky., November 23.

WILLIAM R. S. DENNER, M.D., Pittsburgh, to Miss Katheryn Danzglock of Baltimore, December 26.

ROBERT HENRY NEWMAN, M.D., Cleveland, Va., to Miss Lucy Gray of Lebanon, Va., December 19.

CORA WHITE CARPENTER, M.D., Spokane, Wash., and I. B. Jones of Aurora, Neb., December 21.

ROSS H. GREGORY, M.D., Nevinville, Ia., to Mrs. May Griffin, at Fontanelle, Ia., December 14.

COLLIN H. WILCOX, M.D., to Mrs. Elizabeth Baker, both of Princeville, Ill., December 25.

ARIS WELLINGTON COX, M.D., to Miss Norma Johnson, both of Helena, Ark., December 16.

HUNTER B. SPENCER, M.D., to Miss Mary Kemper, both of Staunton, Va., December 25.

Deaths

John Charles Adams, M.D. Tulane University, New Orleans, 1857; assistant surgeon of the Thirty-First Mississippi Infantry, C. S. A., during the Civil War; rector of St. Mark's Church, Lake City, Minn., from 1868 to 1872; up to the time of his retirement from practice a year ago, a member of the Minnesota State Medical Association and the Wabasha County Medical Society; who was tendered a banquet by the members of the latter society and friends in 1906 on the occasion of his seventy-sixth birthday and was presented with a gold-headed cane; died at the home of his daughter in St. Paul, December 19, from senile debility, aged 79.

George Fayette Wright, M.D. Miami Medical College, Cincinnati, 1874; for several years a practitioner of Ellsworth, Kan., and at one time assistant surgeon, division surgeon and assistant chief surgeon of the Union Pacific Railway and in charge of the company's hospital in Denver; professor of orthopedic surgery in Gross Medical College; later a resident of St. Petersburg, Fla., and health officer of that city; died at his home in St. Petersburg, December 19, from colitis, aged 63.

William McVey Wright, M.D. Medical College of Indiana, Indianapolis, 1890; formerly head of the department of surgery in his alma mater and superintendent of the Indianapolis City Hospital in 1895; formerly chief medical officer of the Indiana National Guard, with rank of lieutenant-colonel; who had a cerebral hemorrhage in 1903, as a result of which he became an inmate of the Central Hospital for the Insane, Indianapolis; died in that institution, December 15, aged 48.

James Lyman Belknap, M.D. Harvard Medical School, 1902; of Wolfboro, N. H.; hospital steward during the Spanish-American War; assistant surgeon U. S. Navy from 1904 to 1908 when he resigned; assistant surgeon thereafter for a year in the Massachusetts General Hospital; died in that institution, December 28, from pulmonary embolism, a week after an operation for appendicitis, aged 37.

George M. Dakin, M.D. Eclectic Medical Institute, Cincinnati, 1862; founder of the city library of Laporte, Ind.; physician to the Ruth C. Sabin Home for Elderly Ladies, and the Northern Indiana Orphans' Home; for nearly fifty years a practitioner of Laporte; died at his home, December 21, from senile debility, aged 84.

Henry Kerr Hartzell, M.D. University of Vermont, Burlington, 1863; who after 1870 went into banking business and hematite ore mining; an authority on metallurgy and especially iron ores; president of the Lehigh Mills Corporation; died at his home in Allentown, Pa., December 20, from pneumonia, aged 72.

Andrew Davieson Estill, M.D. Jefferson Medical College, 1890; formerly a member of the American Medical Association; coroner and health officer for Rockbridge, Va., and health officer for Lexington; formerly a member of the Lexington town council; died at his home in Lexington, December 25, aged 57.

John J. Wilder, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1878; a veteran of the Civil War; a member of the Iowa State Medical Society and American Association of Railway Surgeons; formerly mayor of Kingsley, Ia.; died at his home in that city, December 22, from diabetic gangrene, aged 41.

William H. Ravenscraft, M.D. Jefferson Medical College, 1857; a practitioner of Frostburg and Oakland, Md.; once president of the Medical and Chirurgical Faculty of Maryland, and for several years mayor of Frostburg; died at his home in Denver, Colo., December 18, from paresis, aged 78.

George W. Little, M.D. Albany (N. Y.) Medical College, 1858; for more than half a century a practitioner of Glens Falls, N. Y.; coroner of Warren County for twelve years; physician to the Glens Falls Hospital; died at his home in that city, December 16, aged 76.

Chester F. Brown, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1890; a member of the Missouri Medical Association, and secretary of the Barton County Medical Society; died at his home in Lamar, December 21, from cancer of the throat, aged 63.

James Addison Wick, M.D. Jefferson Medical College, 1870; a member of the Medical Society of the State of Pennsylvania; vice-president of the First National Bank of New Bethlehem; died at his home in that city, December 24, aged 65.

William B. Sims, M.D. Kentucky School of Medicine, Louisville, 1879; a practitioner of Champaign County, Ill., since 1870; a veteran of the Civil War; for two terms police magistrate of Urbana; died at his home in that city, December 23, aged 75.

Augustus Villeroy Hill, M.D. College of Physicians and Surgeons, New York City, 1869; for several years deputy county physician of Hudson County, N. J.; died at his home in Woodcliffe-on-Hudson, December 24, from cerebral hemorrhage, aged 66.

Charles James Burke, M.D. Bellevue Hospital Medical College, 1894; for twelve years assistant registrar of vital statistics of the New York Board of Health; died at his home in Mount Vernon, N. Y., December 17, from pneumonia, aged 51.

Belford Wood Pickering, M.D. Medical College of Ohio, Cincinnati, 1877; for several years a member of the staff of the Athens (O.) State Hospital; died at his home in Gloucester, O., December 20, from cerebral hemorrhage, aged 58.

Isaac de Forest Nichols, M.D. Bellevue Hospital Medical College, 1866; surgeon of volunteers during the Civil War; for many years a practitioner of Fort Lee, N. J.; died in a hotel in Yonkers, N. Y., December 22, aged 67.

John Q. Mulford, M.D. Eclectic Medical Institute, Cincinnati, 1883; of Lebanon, O.; died at his home, December 10, aged 52, from injuries received in the caving-in of a tunnel between a heating plant and a greenhouse.

Benjamin F. Price, M.D. University of Maryland, Baltimore, 1857; for forty-five years a practitioner of Mount Carmel, Md., and later health officer of the Fifth District; died at his home in Mount Carmel, December 15, aged 76.

Calixte J. Baillargeon, M.D. Laval University, Montreal, 1905; a member of the York County (Me.) Medical Society and a resident of Sanford; died at the home of his brother, in Biddeford, Me., December 16, aged 35.

David F. May, M.D. Jefferson Medical College, 1856; of Petersburg, Va.; first superintendent of the Piney Grove Hospital for the Colored Insane, Richmond, Va.; died in the Petersburg Hospital, December 18, aged 76.

John Pickett Watkins, M.D. Vanderbilt University, Nashville, Tenn., 1911; who was preparing to practice in Helena, Ark.; died at the home of his mother in Jonestown, Miss., December 17, from malaria, aged 24.

Thomas Cloman Pugh, M.D. University of Pennsylvania, Philadelphia, 1859; surgeon in the Confederate Service throughout the Civil War; died at his home in Baltimore, December 28, from nephritis, aged 74.

Benjamin Perkins, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1867; for many years a practitioner of Croxton, Mo.; died at the home of his son in Bellflower, Mo., December 15, aged 82.

Benjamin Shurtleff, M.D. Harvard Medical School, 1848; a practitioner of Napa, Cal., for sixty-two years and once mayor of the city; died at his home in Napa, December 22, from senile debility, aged 90.

Charles E. Button, M.D. Rush Medical College, 1898, of Billings, Mont.; is said to have committed suicide by taking poison and shooting himself after having killed his wife, December 27, aged 53.

Edward Aloysius Haire, M.D. Baltimore University, Baltimore, 1898; of Brooklyn, N. Y.; was found dead in a hotel in Elkhart, Ind., December 8, from the effects of an overdose of a drug, aged 37.

A. Judson Palmer, M.D. New York University, New York City, 1854; for more than half a century a practitioner of Brooklyn, N. Y.; died at his home, December 26, from heart disease, aged 78.

A. Isaac Friedman, M.D. Bennett Medical College, Chicago, 1895; a specialist on diseases of the eye, ear, nose and throat, of San Antonio, Tex.; died at his home in that city, December 13, aged 52.

Herman Lewin, M.D. Eclectic Medical College of the City of New York, 1896; physician to the New York Letter Carriers' Association; died at his home in New York City, December 28.

William E. Williams, M.D. Medical College of Ohio, Cincinnati, 1873; a member of the Ohio State Medical Association; died at his home in Jackson, December 26, from pneumonia, aged 63.

Alexander M. Vail, M.D. Northwestern University Medical School, Chicago, 1882; of Rock Rapids, Iowa; died at the home of his sister in Chicago, December 17, from heart disease, aged 63.

James A. Flautt, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881; for several years coroner of Jersey County, Ill.; died at his home in Otterville, December 24, aged 63.

James H. Turner, M.D. University of Pennsylvania, Philadelphia, 1851; one of the oldest practitioners of Virginia; died at his home in Front Royal, December 8, aged 33.

Orville Layne Rogers, M.D. Vanderbilt University, Nashville, Tenn., 1881; a member of the Medical Society of Virgina; died at his home in Covington, December 26, aged 52.

Leslie Martin, M.D. Albany (N. Y.) Medical College, 1864; formerly of Lysander and Baldwinsville, N. Y.; died in the Gowanda State Hospital, November 30, aged 69.

Sabinus Monroe Mathes (license, Arkansas, 1903); for twenty years a practitioner of Lawrence County; died at his home in Black Rock, December 9, aged 63.

Edward Payson Clark, M.D. New York University, New York City, 1890; died at his home in Utica, December 16, from cirrhosis of the liver, aged 48.

B. T. Laster, M.D. University of Tennessee, Nashville, 1890; of Jacks Creek, Tenn.; died in the West Tennessee Hospital, Lexington, December 20, aged 48.

George Henry McFarland, M.D. College of Physicians and Surgeons, New York City, 1902; of New York City; died in Denver, December 4, aged 35.

Charlotte Cole Jenkins, M.D. New York Medical College and Hospital for Women, 1879; died at her home in New York City, December 25, aged 78.

Charles P. Woodring, M.D. New York University, New York City, 1879; died at his home in Meadville, Pa., December 19, from arteriosclerosis, aged 58.

Joseph Alberic Genereaux, M.D. Medical School of Maine, Brunswick, 1886; died at his home in Southbridge, Mass., December 22, aged 50.

Eliza Henderson Lang McClure, M.D. Boston University, School of Medicine, 1877; died at her home in Philadelphia, December 12.

A. S. Tinsman, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1868; died at his home in Luray, Mo., December 17.

John H. S. Reiley, M.D. Medical College of Ohio, Cincinnati, 1867; died at his home in Sardinia, Ind., December 26, aged 64.

William A. Moore, M.D. Memphis (Tenn.) Medical College, 1888; died at his home in Quitman, La., December 13, aged 45.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

SOCIETY OF UNIVERSAL SCIENCE

A Pseudomedical Cult Giving Mail-Order Courses in the "Laws of Human Electricity"

For the past three years, a concern styled the Society of Universal Science has been doing a mail-order business in selling "courses" that purported to teach the "Laws of Human Electricity and Their Application to Health, Mind Power and Spiritual Growth." The president of this so-called society was one Andrew McConnell; in fact, McConnell seems to have been the "whole thing." Offices were maintained in New York and Chicago. Dupes were obtained by means of the usual newspaper advertisements, although this method was supplemented by the "free lecture" scheme. In connection with the lectures, McConnell seems to have succeeded in fooling a number of people, men who should have known better, and the names of these individuals have been used by him for the purpose of lending an air of respectability to his mail-order business.

Those who wrote to the "society" for information were sent a fifty-page booklet entitled "Organic Electricity—the McConnell Researches—Health Booklet," and a form letter of the style so much used by those engaged in operating mail-order medical businesses. Briefly, McConnell put forward the following proposition:

1. "Life power in the human body is electricity."
2. "Health is measured by the amount of electricity in each organism."
3. "The electric energy of life can be increased by following the laws of electricity."
4. "The electric energy of the human body is the great solvent power of uric acid."

McConnell claimed to have discovered these "facts" in his attempt to cure himself of "nervous prostration, heart trouble, etc." Like the lady in the "patent medicine" advertisement, he had tried "all the usual systems of healing" without avail. Then he discovered "organic electricity" and all was well. The booklet explains how marvelous cures are brought about by those who are willing to purchase the correspondence course sent out by McConnell.

Have you indigestion?

"We prove digestion to be entirely an electrical process which explains why the science of human electricity is curing all cases of indigestion."

Are you troubled with insomnia?

"We have discovered physical laws . . . by means of which one draws the energy from the brain to the vital organs and sleep is the inevitable result." [Evidently, to those embracing the McConnell system, the brain is not a vital organ.]

Possibly you are troubled with constipation!

"Constipation is primarily caused by insufficient electricity in the intestines . . . Through our method of teaching the student the scientific way of how to generate more vital force in the body, the intestines get the increased supply which increases the muscular activity, which in turn removes the cause of constipation."

Have you paralysis?

"We teach the student how to make the paralysed part a magnetic center . . . This is the scientific way to cure paralysis. . . . The worst cases have been overcome in a few months."

Are you going blind?

"The eye power is largely regulated by the amount of electricity available in the body . . . Everyone can overcome eye weakness in a short time by learning to produce and direct more power to the eye . . . We have had most remarkable results in all types of eye troubles."

Are you in the last stages of consumption?

"When this dread disease reaches the last stages, its cure is arduous and difficult but still possible."

Do you suffer from uric acid poisoning?

"The electric energy of the human body is the great and only solvent power of uric acid."

In fact, have you any disease?

"Vital increase and control will cure any known malady."

Has one of your lungs been partly destroyed by tuberculosis? Has the structure of your kidneys succumbed to the inroads of nephritis?

"When we increase the vital production it becomes a simple matter to gradually rebuild any diseased part of the body."

All of these wonderful results may be accomplished—according to the McConnell booklet—by taking a mail-order course in "human electricity." Of course there are testimonials most of them from women who, apparently, have been cured of immaterial maladies at the expense of some material cash. Two or three individuals who place "M. D." after their names testify to the wonders of the McConnell system. One is a man whose name recently appeared among the incorporators of a "drugless healing" college that is being founded by the advertising manager of Peruna, C. S. Carr; the other M.D. is on the faculty of an institution that gives mail-order courses in "chiropractic."

Should the first form-letter to the prospective victim fail to bring to the Society of Universal Science the $25 that is asked for the "course," he is bombarded with the usual follow-up letters, so dear to the heart of the mail-order quack. The price is reduced to $15.00 and finally the "first and second lectures" are offered for $1.00. The supply of easy marks for a proposition of this kind is always large and the business has doubtless been a profitable one. As has already been said, McConnell succeeded in getting the endorsement of some men who should have known better.

One of such men was the Rev. Dr. Robert S. MacArthur, who stands high in the religious world. On July 7, 1908, at Carnegie Hall, in New York City, Mr. MacArthur is reported to have introduced Andrew McConnell to an audience of several thousand people in the following terms:

"This is an occasion of remarkable interest. It is the beginning of a world-wide movement . . . The days of medievalism are passed . . . I believe in the 103d psalm, which says that God healeth. How? By law working through human instrumentality. Dr. McConnell has gone through many forms of healing. He has found the force behind them all, has found the law, and when he found the law he found God Almighty himself . . . I believe that He has called Dr. McConnell to interpret God in the human body."

Besides the introducing clergyman there were many well-known citizens of the metropolis, all sympathetically interested in the founder of the "Universal Science," the "curative law."

In such an eminently respectable atmosphere, then, was the McConnell psychotherapeutic boom launched. How has it ended? A week or two ago this wretched man surrendered to the police of New York City. A pathetic figure indeed was taken into custody; his eyes red from weeping, his hair unkempt—McConnell was obviously a nervous wreck. He had, under the alleged impulse of delusions that she was interfering with his great "work," shot at his wife twice, one bullet striking her in the back of her head, as she was fleeing from him. At the time of his arrest his pockets were filled with testimonials praising his "system."

What other than gloomy comment is possible in these circumstances? Shall the Rev. Dr. MacArthur go unscathed? We have got by medievalism, declared he. Was there ever so complete a reversion to medievalism as this clergyman's exploitation of one who is evidently a paranoiac? Is such the kind of psychologic healing which the clergy would be understood as upholding, the kind they would themselves be considered proficient in? Moreover, the large audiences of McConnell were attended by many educated people. Yet if, among all those people of superior enlightenment, there was a single individual of training in psychology and mental therapeutics sufficient to estimate reasonably the claims put forth by McConnell, his identity has ever since been most sedulously concealed.

Apparently McConnell is an irresponsible paranoiac and, if so, should not be at large. But in these premises should not some responsibility rest on a clergyman who is probably the acknowledged head in these United States of a great division of the Christian church? Were not he, and those other "intellectuals" who listened so gravely to McConnell's idiotic vaporings about "life" and "health" and "electricity" and all the rest, who hailed this poor dement as the discoverer of a new philosophy and of an unprecedented healing art—were not they all together fostering the megalomania which has resulted in a homicidal frenzy of well-nigh fatal consequence?

Briefly, the matter amounts to this: Men and women who should have known better have lent the weight and respectability of their names to a scheme that was as bizarre and unreasonable as its originator was mentally unstable. Scores of ignorant people, and dozens of those not so ignorant, have been humbugged and swindled by the McConnell fake. The desperately ill, the hopelessly invalided, those who through the sickness of themselves or of those dependent on them are ready to grasp at any therapeutic straw, however worthless—those are the ones that are made to suffer mentally, physically, and financially by such schemes as McConnell's Society of Universal Science. Only those who have followed up specific instances of the harm done by pseudomedical cults know the tragedies for which such organizations are responsible. That such tragedies should be possible in this twentieth century is an anomaly and a disgrace.

Correspondence

The Army Canteen

To the Editor: I have read with interest the petition to the United States Senate and House of Representatives for the restoration of the beer feature of the canteen, published in THE JOURNAL, Dec. 16, 1911, also a letter from Dr. W. W. Keen of Philadelphia on the same subject, published Dec. 30, 1911.

As a champion of the beerless canteen or exchange, I feel it my duty to briefly reply. It is not my intention to enter into a lengthy discussion of the subject, for the reason that I published in the *Continent*, Dec. 7, 1911, an article entitled, "The Truth About the Beerless Canteen," which in my opinion supplies all the arguments necessary to combat the contentions made by the advocates of the restoration of beer. They claim that the absence of beer increases,

1. General sickness in the army.
2. Venereal diseases in the army.
3. Alcoholism in the army.
4. Desertions in the army.
5. The establishment of vile saloons and low brothels in the vicinity of the army posts.

In view of what I have written on the subject in the *Continent*, I do not think it necessary to reiterate the analysis of the figures given, because it would occupy too much space in THE JOURNAL. The summary, however, is as follows:

1. The sick rate of the army per thousand from 1867 to 1880, during the sale of alcoholics at the post traders' exchange was 2,039, while the sick per thousand from 1901 until 1910, during the prohibition of alcoholics in the posts, was 1,379.

2. The non-efficiency rate per thousand from 1867 to 1880 was 49 (period of the sale of alcoholics in the posts), while the non-efficiency rate per thousand from 1901 to 1910 was 48 (a period when alcoholics were not sold in the posts). It should be taken into consideration also that the period from 1901 to 1910 was unprecedented in the history of the United States Army, inasmuch as our troops served principally in the tropics under most unfavorable conditions, both as to tropical diseases, effects of temperature and isolation in native pueblos, where the men had no social or moral restraint. The sick rate should have been much greater during this period than from 1867 to 1880, all things being considered.

3. The rate of alcoholism per thousand from 1885 to 1898, when alcoholics were sold in the posts, was 41, while the alcoholic rate from 1901 to 1910, during which period it was prohibited, was 26.

4. The venereal rate from 1885 to 1900 was 85 per thousand (during the sale of alcoholics in the post), while the venereal rate from 1901 to 1910 was 162 per thousand, which would make it appear to the casual observer that the rate during the non-alcoholic period of the canteen was double the rate during the alcoholic period. This rate is not real, and admits of a most satisfactory explanation. From 1885 to 1900 no restraint was imposed on the men concerning venereal diseases in the way of inspections and compulsory treatment—only those cases were carried on the sick report who willingly reported themselves. It must be especially borne in mind that the vast majority of men suffering from venereal diseases conceal such infirmities from their fellow men, and especially soldiers, who feel considerable pride in their positions, and who are aware of the fact that such diseases, if reported officially, become a part of their history in the War Department, whereby a subsequent pension may become affected. I submit this as one of the reasons why less than 33 per cent. of the soldiers in the United States Army suffering from venereal diseases were carried on the sick report during the period from 1885 to 1900, which accounts for the apparent low rate of venereal diseases per thousand during that period. Had the real statistics been reported then, the figures would have been at least 255 per thousand, accepting 85 per thousand as being about one-third (⅓) of the real figures during that period. Ask any of the older medical officers who served at the posts during that period about what percentage of cases appeared at the morning sick call, or for treatment, and invariably you will receive the reply that not more than 25 to 30 per cent. were taken up. Indeed, by reference to the annual reports of the surgeon-general to the Secretary of War during that period, numerous reports have been made by post surgeons that such was the case, and I can mention a dozen or more of the posts during that period, which officially reported from 250 to 400 cases per 1,000 from those diseases, and they did not represent all of the cases then. I again affirm that the 162 cases per thousand from 1901 to 1910, as reported by the surgeon-general of the army, do not represent a more serious condition of venereal diseases than existed during the period from 1885 to 1900. Any one who follows the above explanation will see that the lurid statements concerning the tremendous increase of venereal diseases in the army, as a result of the beerless canteen, are groundless.

I have the greatest respect and admiration for Dr. W. W. Keen of Philadelphia—one of the most charming gentlemen in the country, and one of the greatest surgeons in the world. I take off my hat to the galaxy of brilliant men whose names appear in the petition to the Senate and House of Representatives, all of whom are eminent in their specialties, but know little of the sociologic condition of the soldier and his environment. "Let the shoemaker stick to his last," is an adage well worth observing. While these gentlemen are eminent in their own specialties, I feel that their knowledge of army conditions does not warrant them as witnesses in this important matter. The arguments used in the petition consist of statistics on venereal diseases taken from articles or books on such subjects, and refer exclusively to civil life. I cannot see what bearing they have on the soldiers. These statistics show that venereal diseases are exceedingly wide-spread; in fact, are appalling in civil life, and they do not represent one-half of the terrible story. There are no statistics on venereal diseases from civil life that are trustworthy. Those printed are purely guess-work, and do not represent the actual condition. It would be impossible also to obtain the statistics on alcoholism in civil life, for the reason that the vast majority of men who go on sprees, and even suffer from delirium tremens, are not taken up in the vital statistics of their communities.

The statistics bearing on venereal diseases in foreign armies, which appear in this petition, are practically worthless and do not represent those conditions there. It is a well-known fact that many of the foreign armies do not entertain on the sick report the ordinary cases of gonorrhea, chancroids and non-active stages of syphilis; it is likewise known that in some of the armies, reported in this petition, only the most serious cases of venereal diseases are taken up and made record of. Three-fourths of the men in some of those armies suffering from gonorrhea, chancroids and syphilitic conditions perform duty and are never reported by the surgeon at all. The venereal statistics of our army at present are honest, and show to the world conditions that exist in that regard. Heretofore the statistics on that subject were of little value, as they did not represent the true condition, for the reason that no examinations of the men were made previous to the last ten years, and hence from two-thirds to three-fourths of the diseases were concealed.

Dr. Keen calls attention in his letter to the unfortunate condition of the wives and children of the soldiers who become infected, but does not know that soldiers, as a rule, have no wives and children. With the exception of a few of the high-ranking, non-commissioned officers, soldiers are not permitted to marry and are not supplied with quarters in which to live. The character of the high ranking non-commissioned officer who is allowed to marry is practically as good as that of the commissioned officers, and the best class of civilians. I call attention to this matter to show that few people know anything about army life except those who live "on the reservations," and learn by experience.

The contention that desertions result from absence of beer in the canteen is purely chimerical. I believe it would be a good thing for the United States Government to lose all men who cannot get along without their glass of beer. To show that the absence of beer has nothing whatever to do with the desertions of the men, I desire to call attention to the great number of desertions which occurred during the past summer in Texas. Hundreds of men were sent there as recruits from Chicago to fill up the division on duty there at the time. I myself saw notices of fifty desertions at a time of men who had reached there as recruits, and deserted a few days after reaching Texas. These men belonged to that irresponsible class suffering from "wanderlust," instability of character, and who would never make a success of life, no matter what vocation they followed.

The last contention made by the advocates of restoration of beer, is: that, without its sale in army posts, vile saloons and low brothels spring up in the neighborhood, in which the morals of the men are affected and their health destroyed. Every army officer knows that the sale of beer in a canteen has nothing to do whatever with the establishment of saloons and brothels in the neighborhood of the posts, no more than it has to do with the establishment of such places in cities. I remember well during my service at Sam Houston, Tex. (1893 to 1897), that the entire post was flanked by saloons and brothels, although the beer canteen was in full blast. Within fifty feet of the front gate stood one of the largest of such saloons, and there was not a square around the immediate garrison that did not contain one or more of such places. During my service at Fort Hamilton, New York Harbor (1897 and 1898), at which post the canteen officer was exceedingly active in the sale of beer to the men, giving them credit up to $11 or $12 per month of their pay, the garrison was surrounded by the lowest kind of gin mills and brothels. These establishments have nothing whatever to do with the case in question, and should have no effect in the argument. Recently, at a lecture in the Men's League of Chicago, I was told that there were 150,000 drunkards and 50,000 narcotic addicts in Chicago, where you will find in many places three to four saloons in each square.

In conclusion, I desire to say that I am gratified to learn the personal attitude Dr. Keen takes in regard to the personal use of alcoholics, and only regret that he does not feel the same way toward the young soldier. In discussing this subject with one of the most eminent physicians of Chicago a few days ago, who is in favor of the restoration of beer to the canteen, I was informed by him that he had promised his son, who is now 15 years old, $20,000, the day he reached the age of 25, provided he had never touched alcoholics. I asked him what he thought of the other man's son, for whom he advocated beer. In reply, he could only shrug his shoulders.

The United States Government has imposed on army officers a holy obligation, and the parents of our young soldiers have entrusted us with the care of their sons. Shall we be

true to that trust or not? Shall we place temptation before young men who have left their parents' roofs—young men who have never tasted alcoholic drinks in their lives? The answer is too obvious to need reply. The statistics used in this letter are taken from the annual reports of the surgeon-general of the army to the Secretary of War from 1867 to1910.

L. M. MAUS, Colonel, Medical Corps, U. S. A.,
Chief Surgeon, Central Division.

Medical Men as Illustrators

To the Editor:—I have often noticed, while examining some of my old medical works, that they were illustrated by the authors or by fellow doctors, and out of a list of sixty, I find that some thirty were Americans. Many of the latter are still living, doing splendid illustrative work, while many of the sixty have their drawings buried away in books without even an acknowledgment from the author. The list follows:

Amusco, Jean Valverde de
Allen, Harrison
Anderson, Alex.
Barker, Jeremiah
Barton, B. S.
Barton, Wm. P. C.
Beale, Lionel S.
Bell, Charles
Bell, John
Blackburn, I. W.
Bigelow, Jacob
Camper, Pierre
Cushing, Harvey
Dickinson, Robert L.
Cheselden, Wm.
Cripps, Harrison
Dalton, John Call
Dorsey, John Syng
Flagg, Josiah Foster
Foote, E. M.
Fyfe, Andrew
Gibson, Wm.
Gilpin, John Bernard
Graves, William P.
Goodsir, John
Haden, Seymour
Hayden, F. V.
Heitzmann, Carl
Henle, J.
Hewitt, Wm. Morse
His, Wilhelm H.
Howship, J.
Hodge, Hugh L.
Johnson, Laurence
Judd, Gerrit Parmele
Kane, E. K.
Krasnowski, Yakovlevich
Leidy, Joseph
Lizars, William Howe
Moore, James
Morris, Henry, Sir
MacLise, Joseph
Owen, David Dale
Packard, John Hooker
Politzer, Adam P.
Porcher, Francis Peyre
Ramsay, Alex.
Ribemont, Alban
Ruge, Carl
Ruysch, Frederic
Sampson, J. A.
Say, Thomas
Scarpa
Shufeldt, R. W.
Smellie, William
Spigelius
Smith, J. Lawrence
Van der Laaw
Webster, J. Clarence
Wood, John
Woodward, Joseph Janvier
Yale, LeRoy
Young, Daniel S.
Zimmermann, J. C. E.

The progress of my forthcoming work, "Some American Doctors as Botanists", has been so expedited by your kind insertion of my inquiry concerning these that I again ask your help in securing information for my "Medical Men as Illustrators," so as to have full credit given to those of our confrères who have done fine artistic work.

HOWARD A. KELLY, 1418 Eutaw Place, Baltimore.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CARBON-DIOXID SNOW

To the Editor:—Please inform us where we may obtain carbon-dioxid snow suitable for removing warts, etc., whether or not we can obtain the sticks, and their approximate cost.

DRS. TELFORD AND HORNER, Olney, Ill.

ANSWER.—Carbon-dioxid snow cannot be obtained in the stick form, but the carbon-dioxid snow, which is carbon-dioxid gas that has been solidified by freezing, may be made from liquid carbon dioxid, which is used in commerce for aerating soda-water. As almost every drug store buys liquid CO_2 in tanks for its soda fountain, it can be obtained through one's druggist. To get the snow it is necessary to have a tank containing a supply of liquid carbonic gas. These tanks are about 6 inches in diameter and 4 feet long with a nozzle at one end, which is the vent for the gas. To collect the snow, such a tank is placed in a position slightly slanting from the horizontal with the nozzle at the lower end, so that the liquid is at the lower end of the tank. A piece of chamois skin should be held over the nozzle so that it makes a loose bag; then when the nozzle is opened by unscrewing the valve, with a small wrench which comes with the tank, the liquid CO_2 is ejected into the chamois bag and collects in the form of snow. When the nozzle is closed and the chamois removed the solidified CO_2 will be found loosely packed on the surface of the chamois skin, appearing like ordinary snow, and it can be molded and packed as one would pack ordinary snow. The simplest way to do this is to take a metal tube, 2 or 3 inches long and ¼ inch in diameter, or of a diameter corresponding to the lesion which it is desired to treat, and pack the snow in this with a rod just as one would pack ordinary snow in such a tube if one wanted to make a stick of that. To make a firm, hard stick of CO_2 the snow should be packed into the tube with a good deal of force. The easiest way to apply this is to pack it down by hammering on the top of the rod. With a little practice masses of snow can be made of any size and any density by this method. Of the special forms of molds the most convenient mold is that suggested by Sutton, which simply consists of metal tubes with a flange of metal at the top that forms a funnel through which it is easy to pack the snow into the tube. With a little care in manipulating the chamois, there is no danger of freezing the operator's hands, but this can be entirely obviated by wearing gloves.

A number of articles on the preparation of the snow have appeared in THE JOURNAL and a few of these are listed below:

Tousey Sinclair: Blotting-Paper Mold for Obtaining Crayons of Carbonic-Acid Ice, THE JOURNAL, May 7, 1910, p. 1519.
Stelwagon, Henry W.: A Convenient Source of Carbon-Dioxid Snow, THE JOURNAL, Oct. 3, 1908, p. 1205; The Use of Carbon-Dioxid Snow in the Treatment of Nevi and Other Lesions of the Skin, THE JOURNAL, Oct. 19, 1907, p. 1354.
Pusey, W. A.: Expensive Molds for Solidified Carbon Dioxid, THE JOURNAL, Aug. 7, 1909, p. 459.
Hutchins, M. B.: Mold for Carbon-Dioxid Snow, THE JOURNAL, March 6, 1909, p. 786.
Sutton, R. L.: Mold for Carbon-Dioxid Snow, THE JOURNAL, Feb. 6, 1909, p. 464.

THE BINET-SIMON TESTS

To the Editor:—Please tell me where I can obtain the full text of the Binet tests discussed in THE JOURNAL, December 16, p. 2001, under Current Comment. CHARLES W. ALLEN, Hoboken, Pa.

ANSWER.—Many requests similar to the above make it evident that the following information will be appreciated: Both the 1905 and 1908 series of the Binet-Simon tests are satisfactorily given in G. M. Whipple's "Manual of Mental and Physical Tests," published by Warwick and York, Baltimore, 1910. One of the best short summaries of the test is given by H. H. Goddard in an article entitled "A Revision of the Binet Scale," published in the *Training School*, Vineland, N. J., June, 1911, which gives an adaptation of the scale for American children. Binet published the last revision of his scale in the *Bulletin de la Société libre pour l'étude psychologique de l'Enfant*, April, 1911. The tests were originally published in the *Année Psychologique*. Several interesting criticisms of the scale are contained in an article by Leonard P. Ayres, entitled "The Binet-Simon Measuring Scale for Intelligence: Some Criticisms and Suggestions," in the *Psychological Clinic*, Nov. 15, 1911. The *Psychological Clinic* for Dec. 15, 1911, is devoted entirely to the Binet-Simon tests. An article by H. H. Goddard, entitled "Two Thousand Children Measured by the Binet Measuring Scale of Intelligence," published in the *Pedagogical Seminary*, June, 1911, p. 232, gives, in addition to comments on the reliability of the scale, some criticisms of Binet's last revision. An article by H. H. Goddard and H. F. Hill, published in the *Training School*, June, 1911, on "Delinquent Girls Tested by the Binet Scale," may also be found of interest. Binet's series of standardizations is similar to those elaborated by Ebbinghaus, Sommer, Fiehen and others, a decade or two ago. On account of their ease of application, the Binet-Simon tests have acquired considerable vogue.

THE CONTAGIOUSNESS OF EPIDEMIC CEREBROSPINAL MENINGITIS

To the Editor:—In looking up the medical authorities I have at my disposal on the subject of epidemic cerebrospinal meningitis, in reference to the contagiousness of the disease, I find conflicting opinions. The State Board of Health of Kansas classes epidemic cerebrospinal meningitis along with small-pox, scarlet fever and other contagious diseases. Holt (1902) says (p. 750) the disease is not contagious. Osler says practically the same thing, but I have not consulted his late edition. Hare (1911) omits any mention as to the contagious elements in the disease. In my personal experience I have seen not to exceed one dozen cases in twenty-five years of practice and have not been able to conclude that one case originated from another. I should like to have the opinion of other medical authorities not at my disposal, whether for or against the contagious theory of the disease.

If we admit the contagious character of epidemic cerebrospinal meningitis, I should be pleased to have precise directions as to just how one can disinfect the carriers of the disease, with suggestions

in the way of precautions for the physician so that he may not become a carrier. The method of disinfecting which we would ordinarily adopt for small-pox will scarcely avail if the *Diplococcus intracellularis* is lodged on the mucous surfaces of the nose and throat. J. ALLEN PALMER, Erie, Kan.

ANSWER.—Prior to 1905, very few American physicians of the present generation had personal experience with epidemics of cerebrospinal meningitis and the "carriers" had not been discovered. Now it is known that several times as many "carriers" have meningococci in the nasopharynx as there are persons who develop cerebrospinal meningitis. Besides, the nasopharyngeal site of entry of the meningococcus has been more certainly established during the last four or five years. In other words, text-books written prior to 1906-7 have not taken epidemic meningitis very seriously, just as they have not taken epidemic poliomyelitis seriously until recently.

There can hardly be two opinions about the contagiousness of cerebrospinal meningitis, although, of course, the degree is far less than that of measles, diphtheria or scarlet fever; and, indeed, there are very great differences in the degree of contagiousness of these last affections—and yet the contagiousness of the least of them is not denied in relation to that of the worst. The individual experience of any one physician is, of course, a very uncertain basis of decision regarding contagiousness in general. And in cerebrospinal meningitis, as in poliomyelitis, there are surely marked individual differences of susceptibility. But as we possess at present no means of distinguishing the susceptible and the insusceptible the only course left open is to deal with the disease as we do with the common contagious ones.

As to the practical question of method of prevention, the problem is about the same as with diphtheria, only not so serious. The meningococci tend to disappear from the nasopharynx, or to become very few, by the time the disease has run its course and convalescence is established. A few persons, however, are converted into "carriers" and in them it is difficult to suppress the meningococci. The suppression of the meningococci in passive carriers, once they are discovered, is also difficult. The latter source of danger can be averted by taking account of the infectiousness of the nasal and buccal secretions and preventing contamination from spitting, etc., and by caring for hands, clothing, etc. The disinfection of rooms should be by scrubbing and then by the usual gaseous disinfectants, followed by free air and sunlight. Fortunately the meningococcus has no very great power of survival outside the body.

AGGLUTINATION OF BACTERIA BY ACIDS.

To the Editor:—I am much interested in the editorial (THE JOURNAL, Dec. 16, 1911, p. 1998) on agglutination of bacteria by acid concentration of hydrogen ions. Is the article referred to printed in English and if so where can I obtain it? If not, can you give the subject a more extensive review? C. C. M.

ANSWER.—Michaelis' last report is published in the *Folia Serologica*, 1911, vii, 1010. The American agents for this periodical are G. E. Stechert and Co., 151 West Twenty-Fifth Street, New York, and the price of this number is given as $1.05 (4.20 marks). His earlier communication on the subject was published in the *Deutsche medizinische Wochenschrift*, 1911, xxxvii, 969. Michaelis uses for the test the following six solutions:

		Normal Sodium Hydroxid Solution	Normal Acetic Acid	Distilled Water	Hydrogen Ions Concentration (Approximately)
		c.c.	c.c.	c.c.	
Solution	1..	5	7.5	87.5	1×10^{-5}
"	2..	5	10	85	2×10^{-5}
"	3..	5	15	80	4×10^{-5}
"	4..	5	25	70	8×10^{-5}
"	5..	5	45	50	16×10^{-5}
"	6..	5	85	10	32×10^{-5}

Six test-tubes are prepared by placing in one 1 c.c. of Solution 1, in a second tube 1 c.c. of Solution 2, etc. The fluids are kept on hand in vials with a rubber stopper in which is set the neck of a 1 c.c. pipette. The pipette is filled by pressing on the rubber stopper. The upper end of the pipette is then closed with the finger, and the pipette, still in the rubber stopper, is removed from the vial and its contents are then ready to use. A suspension is made of a twenty-four-hour agar culture of the bacteria in question, after rinsing the culture with a few drops of water to wash away any phosphates, etc., which might disturb the reaction. The suspension is made with 5 c.c. of distilled water and the whole is well shaken and transferred to another glass when it is diluted to 20 c.c. The suspension is then poured into a 20 c.c. burette, with a glass stop-cock, and 3 c.c. of the suspension is placed in each of the already prepared six test-tubes. Incubator temperature hastens the appearance of the reaction, but the test-tubes should be taken out of the incubator after an hour at longest and be observed at room temperature thereafter. According to the agglutinating property of the bacteria, agglutination occurs in fifteen minutes or not until after several hours, and it may be evident only in one or two of the test-tubes. Tests with other substances have constantly confirmed the fact that it is the concentration of hydrogen ions which is the essential factor involved. The optimum hydrogen ion concentration for typhoid bacilli is always in the third or fourth tube while for paratyphoid it is the fifth or sixth. Colon bacilli do not seem to be agglutinated by acids at all.

MOSER'S ANTISCARLATINAL SERUM

To the Editor:—Please state where I may obtain such a serum as was used by Moser in the treatment of scarlet fever. X. Y. Z.

ANSWER.—Moser's antiscarlatinal serum is a European preparation; we find no statement as to where it may be obtained. It is said to be prepared from the serum of horses which have been immunized against cultures of living streptococci obtained from the blood of scarlet fever patients. A serum closely corresponding to this is put on the market by Burroughs, Wellcome and Co., named Antistreptococcus Serum (Scarlatina), but this is said to be obtained from horses injected with killed cultures. See New and Nonofficial Remedies, Ed. 1911, p. 189.

The Public Service

Medical Corps, U. S. Navy

Changes during the week ended Jan. 6, 1912.

Benton, F. L., surgeon, detached from the *Idaho* and ordered to the *Maine*.

Thompson, E., surgeon, detached from the *Maine* and ordered to the naval station, Guantanamo, Cuba.

Hoen, W. S., P. A. surgeon, detached from the naval station, Guantanamo, Cuba, and ordered to the *Idaho*.

Cole, H. W., P. A. surgeon, ordered to the naval recruiting station, Baltimore, January 8.

Dorsey, B. H., P. A. surgeon, ordered to duty at the naval hospital, Boston.

Medical Department, U. S. Army

Changes during the week ended Jan. 6, 1912.

Collins, C. C., major, leave of absence extended one month.

Allen, William H., lieut., granted thirty days' leave of absence.

Ingalls, R. E., dental surgeon, left from temporary duty at Fort William H. Harrison, en route to Fort Missoula, Mont., for temporary duty.

Voorhies, H. G., dental surgeon, reports as on duty at Fort Leavenworth, Kan., since Dec. 21, 1911.

Sherwood, C. E., acting dental surgeon, left Columbus Barracks, Ohio, en route to presidio of Monterey, Cal., for duty.

Ingalls, R. E., dental surgeon, reports for temporary duty at Fort Missoula, Mont.

Morse, Arthur W., major, on arrival at San Francisco on the *Sherman* will accompany Seventh Infantry to Fort Leavenworth, Kan., and then proceed to Fort Morgan, Ala., for duty.

Wilson, James A., lieut., on arrival at San Francisco on the *Sherman* will accompany Seventh Infantry to Fort Leavenworth, Kan., and then proceed to Fort Slocum, N. Y., for duty.

Whitney, Walter, M.R.C., ordered to Fort Morgan, Ala., for temporary duty.

Millikin, John D., contract dental surgeon, leave of absence extended to and including March 4, 1912.

Chappell, Sidney L., M.R.C., ordered to active duty and assigned to station at Fort Totten, N. Y.

Stuckey, Harrison W., M.R.C., ordered to the Philippine Islands for duty on March 5, 1912.

Osborn, Henry C., M.R.C., resignation of commission as first lieutenant accepted.

Brooks, William H., major, ordered to report in person to the president of the army retiring board at San Francisco for examination by the board.

U. S. Public Health and Marine-Hospital Service

Changes for the fourteen days ended Jan. 3, 1912:

Cobb, J. O., surgeon, detailed to represent the service at the annual conferences of the Council on Medical Education and of the Council on Health and Public Instruction of the American Medical Association to be held at Chicago, Feb. 26-27, 1912.

Francis, Edward, P. A. surgeon, directed to proceed to Cleveland, Detroit and Kansas City for the inspection of laboratories under the act of July 1, 1902.

Boards of medical officers were convened for the physical examination of officers of the Revenue-Cutter Service as follows:

Fort Townsend, Wash., Dec. 22, 1911, Surgeon P. M. Carrington, chairman; P. A. Surgeon R. H. Earle, recorder.

New London, Conn., Dec. 27, 1911, P. A. Surgeon G. L. Collins, chairman; Acting Assistant Surgeon J. G. Stanton, recorder.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE OWEN BILL

What It Is and What It Is Not

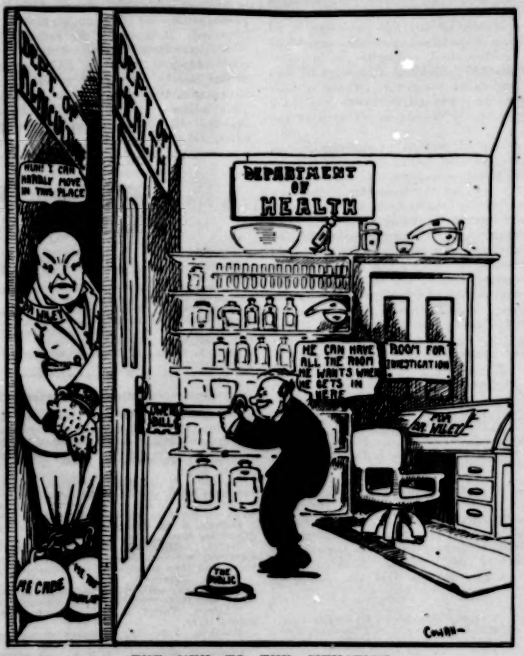
Out of the thousands of newspaper clippings received regarding meetings held by the National League for Medical Freedom, interviews by their leaders and canned editorials denouncing the Owen Bill, not one of these newspaper items quoted from the bill itself, neither does it appear that the bill was read at a single meeting or quoted from verbatim by a single speaker. In fact, it is evident that many of the speakers and writers employed by the League for Medical Freedom have never even read the bill which they denounce.

WHAT THE OWEN BILL IS

Taking up the bill by sections: Section 1 provides for an executive department known as the Department of Health, of which a Director of Health—to be appointed by the President — shall be the head.

Section 2 provides for an assistant, to be known as the Commissioner of Health, and for the usual chief clerk and other department employees and for the auditing of accounts.

Section 3 defines the purpose of the department to be "all matters pertaining to the conservation and improvement of the public health and to collect and disseminate information relating thereto." Provisos carefully safeguard the rights of the states, of private citizens and of all practitioners of healing. This section is the most important part of the bill and should be carefully read.[1]



THE KEY TO THE SITUATION

Section 4 provides for the transfer to the new department of (a) the Public Health and Marine-Hospital Service from the Treasury Department; (b) the Bureau of Chemistry (in part) from the Department of Agriculture; (c) the Division of Vital Statistics, of the Bureau of the Census, from the Department of Commerce and Labor. The President is also authorized to transfer any part of any other department engaged in public health work, except the Medical Department of the Army and the Bureau of Medicine and Surgery of the Navy. All the powers, functions, records and appropriations of any bureau transferred shall be transferred with it.

Section 5 provides for eight bureaus: (a) Sanitary Records, (b) Child Hygiene, (c) Vital Statistics and Publications, (d) Foods and Drugs, (e) Quarantine, (f) Sanitary Engineering, (g) Government Hospitals, (h) Personnel and Accounts.

Section 6 provides for temporary exchange of employees with other departments.

Section 7 provides for an advisory board of seven specialists to advise with the director. This board already exists as the Advisory Board of the Hygienic Laboratory.

Section 8 authorizes the director to call a conference of the health authorities of all the states when deemed advisable. This power is now possessed by the surgeon-general of the Public Health and Marine-Hospital Service.

Section 9 confirms the existing functions of the three bureaus transferred.

Section 10 provides for an annual report to Congress.

Section 11 provides —— dollars to carry out the purposes of the act.

Section 12 is the usual repeal of all conflicting acts.

Section 13 provides that the act shall take effect July 1, 1912.

WHAT THE OWEN BILL IS NOT

1. The bill was not originated by the American Medical Association or by any of its officers or members. Senator Owen's declaration on the floor of the Senate is sufficient proof of this fact. But the American Medical Association has for twenty years urged the passage of such a measure. When Senator Owen introduced his original bill (S. 6049, now S. 1) the Association naturally endorsed it and has continued to do so as it will any measure which is for the public good, but to Senator Owen alone belongs the credit for originating this bill.

2. The passage of this bill will not and cannot create a "medical trust." Every intelligent lawyer knows that the right to regulate the practice of medicine, as well as all other trades and occupations, lies in the state and not in the national government. No law which Congress can pass will or can have any effect on the practice of medicine in the states. (See Freund, Police Power, also Senator Owen's reference to supreme court decisions on this point.)

3. The passage of this bill will not and cannot interfere with the right of any one to select any form of treatment, or any kind of healer or attendant he may desire. This bill has nothing to do with the treatment of individual patients. It provides for the study of diseases in laboratories, by means of chemical, bacteriologic and biologic investigations. It contains no provision whatever for the treatment of any individuals by any one.

4. The passage of this bill will not force any one to submit to any treatment which he does not desire. As stated above and as a reading of the bill will show, this measure has noth-

1. Copies of the bill can be obtained through any congressman or our reprint will be sent on receipt of a stamped addressed envelope.

ing to do with the treatment of individual patients. The provisions in Section 3 fully safeguard the rights of every citizen, although this is entirely unnecessary, since Congress has no power to make any one accept any form of treatment for any disease. Congress may make quarantine provisions, detaining persons suffering from certain diseases until they recover, in order to prevent epidemics. The states may make similar provisions. But neither Congress nor the states have any power to compel any person to take any medicine or form of treatment they do not desire.

"BENEFACTORS OF HUMANITY"

The Baltimore *Sun*, under the heading "An Abhorrent Trust," says: "Despite the noble efforts of the League for Medical 'Freedom,' the abhorrent Medical Trust continues to grind the American People beneath its heel. Wooing the ear of Mr. Taft with its artful sophistries, it has lately induced him to issue an executive order requiring all medical practitioners in the Panama Canal Zone to obtain licenses from the local board of health, of which the notorious Gorgas, murderer of mosquitoes, is boss. What will be the effect of this order? Simply that only so-called 'regular' doctors—rascals who have studied four long years in a medical college and really know a staphylococcus from a peritoneum—in brief, members of the trust—will be able to practice. The gifted lady who cures leprosy by reading out of a book; the sturdy bone-setter, horny-handed but with a kind heart; the scorned discoverer of a sure specific for cancer; the Emmanuel Mover with his soothing voice—these great benefactors of humanity will be chased from the zone.

"And not content with such vile consummations, the Medical Trust pursues at home its campaign of inoculation and espionage. When the army was sent to the Mexican border last spring the hideous corpses of typhoid germs were introduced into the veins of 20,000 men. The mental healers of the United States, working voluntarily and at long distance, saved the poor fellows from immediate death. Not one of them, in truth, developed typhoid fever. But soon or late, as everyone knows, they will die of cancer, and if not of cancer, then of delirium tremens, and if not of delirium tremens, then of senile debility—helpless victims of a medical fad, of the sinister Medical Trust.

"Since then thousands of other Americans have been inoculated—the militiamen of Maryland, the paupers in Maryland asylums, multitudes in other states. The militiamen of New York are just now undergoing the torture; orders have been issued that every man in the Army and the Navy shall bare his arm. And meanwhile, the trust emissaries go snooping about the country, interfering with freedom in other ways. Here in Baltimore, for example, they invade the public schools and search for cases of pediculosis—an imaginary malady invented by the trust. And finding it, they proceed against it barbarously.

"It is to stay all such horrors that the League for Medical 'Freedom' was organized. So far as we have seen, the trust prevails over it; but soon or late, if there is any virtue left in the world, it will enjoy its triumph and its glory."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Fifth Month—Third Weekly Meeting

INJURIES ABOUT THE SHOULDER-JOINT

Discuss diagnosis and treatment of each injury.

I. Fracture of clavicle. II. Dislocations of clavicle; acromial and sternal ends. III. Fractures of scapula. IV. Fractures of upper end of humerus.[1] V. Dislocations of head of humerus. VI. Fracture-dislocation of upper end of humerus.

INJURIES ABOUT HIP-JOINT

Discuss diagnosis and treatment of each injury.

I. Fractures of head and neck of femur.[2] II. Fractures of acetabulum. III. Fractures of greater and lesser trochanter. IV. Dislocations of hip. V. Epiphyseal separation, in children.

1. Progressive Med., December, 1903.
2. Whitman: Medical Record, March 10, 1904. Senn: THE JOURNAL A. M. A., June 10, 1905. Whitman: New York Medical Record, Jan. 2, 1909

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ILLINOIS: Coliseum Annex, Chicago, January 17-19. Sec., Dr. James A. Egan, Springfield.

IOWA: Capitol Bldg., Des Moines, February 6-8. Sec., Dr. Guilford H. Sumner, State House.

KANSAS: National Hotel, Topeka, February 13. Sec., Dr. H. A. Dykes, Lebanon.

NEBRASKA: State House, Lincoln, February 14-15. Sec., Dr. E. Arthur Carr, 141 S. 12th Street.

NEW YORK: January 30-February 2. Chief of Examinations Division, Mr. Harlan H. Horner, Albany.

Annual Conference on Medical Education, Legislation and Public Health

The annual conference on Medical Education, Medical Legislation and Public Health, under the auspices of the Council on Health and Public Instruction of the American Medical Association, will be held at the Congress Hotel, Chicago, on Monday and Tuesday, February 26 and 27, the session to begin at 10 o'clock Monday morning.

On Monday, February 26, the Council on Medical Education will hold its Eighth Annual Conference. A special address will be given by Mr. Frederic G. Hallett, secretary of the conjoint board of England, on "The Organization and the System of Examinations of the Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England." Other important topics bearing on medical education and licensure will be discussed.

On Tuesday, February 27, there will be conferences on medical legislation and on public health. If necessary the session will be continued on Wednesday.

On Tuesday evening a public meeting will be held at Orchestra Hall at which an address on public health will be delivered by Senator Robert L. Owen, of Oklahoma.

It is reported that the annual meetings of the Association of American Medical Colleges and of the two Confederations of State Licensing Boards are to be held respectively on Wednesday and Thursday following the above conferences. There is promise that this series of conferences will be very interesting and helpful.

The "Chicago Medical University" and the "Crescent Medical University"

A "graduate" of the "Chicago Medical University" recently appeared for examination before the Kansas State Board of Registration but failed to pass. It will be remembered (THE JOURNAL, July 9, 1910, p. 134) that this and the "Crescent Medical University" were exposed by the Illinois State Board of Health in 1910, a diploma from each having been purchased at $40 apiece through the assistance of a Georgia physician. Both "universities" were conducted from the same office in Chicago by Dr. Alexander Chittick, Dr. N. O. Bourque and others. Dr. Chittick was convicted and sentenced to sixty days in the county jail for fraudulent use of the mails. His license to practice medicine in Illinois was revoked May 24, 1910.

Miscellany

Value of Experimentation.—The ancients thought as clearly as we do, had greater skill in the arts and in architecture, but they had never learned the use of the great instrument which has given man control over Nature—experiment. . . . We did not get very far in our knowledge of the workings of the animal body in health and disease until we began to use experiment. A few of the old Greeks appreciated its value, Galen in particular, but it was not until the Renaissance, until the advent of Galileo and of Sanctorius, that men realized how powerful it might be. Harvey made use of it in a golden discovery, and his monograph, "Exercitatio anatomica

de motu cordis," is the first great product of the experimental method applied to medicine. Thousands of men with keen eyes had watched the heart beat, had seen arteries spurt red blood, had seen the black blood flow from the veins, and they had thought and thought of how the heart beat and how the blood flowed, but all in vain until, in a few simple experiments, the problem of its circulation was demonstrated. —Osler in *Glasgow Med. Jour.*

Clippings from Lay Exchanges

We often print under this head items of more or less interest, which we have noticed in the newspapers. The following are some collected by "B. L. T." and printed at various times in his column in the Chicago *Tribune:*

LIFE'S LITTLE INDULGENCES

Dr. H. F. O—— of Oconto Falls arrived in the village on Wednesday of last week and has decided to locate here and indulge in the practice of medicine and surgery.—Prairie Farm (Wis.) *Breeze.*

WE CAN SLEEP WITHOUT ASSISTANCE, CAN'T YOU?

Sleeping Partner—Lady or gentleman; lucrative, genuine; £250 to £500; full particulars at interview; good references given and required.—London *Morning Post.*

THE KID SEEMS TO LIKE IT HERE

She had just returned from a case in which she had assisted in ushering a baby into the world for the hundredth time.—*Kendall County Record.*

Society Proceedings

WESTERN SURGICAL ASSOCIATION

Twenty-First Annual Meeting, held at Kansas City, Mo., Dec. 18-19, 1911

(*Concluded from page 58*)

Fibrous Tuberculosis of the Peritoneum Involving Omentum, Intestines and Uterus

DR. C. LESTER HALL, Kansas City, Mo.: The interesting feature in this case was the unusual size of the nodules, varying from that of a mustard seed to a small hazelnut, which were not simply implanted on the tissues, but were buried down in the omentum and mesentery, making it impossible to remove them without tearing into the bowel. Recovery from the operation was uneventful, and to-day, twelve months after the operation, the patient reports herself in fair health and physical condition.

End-Results in Gall-Bladder Surgery

DR. B. B. DAVIS, Omaha, Neb.: I have been able to gain a fair knowledge of the postoperative condition of 234 cases for periods ranging from six months to twelve years following operation. Of this number, there are sixty males and 174 females, or, approximately, three females to one male. Of the 234 gall-bladders, 150 contained stones, and eighty-four were cases of cholecystitis, acute or chronic, without stones. At the primary operation 176 were drained and fifty-eight were subjected to cholecystectomy. Only one of the fifty-eight patients on whom cholecystectomy was done primarily has had enough postoperative trouble to require relief by secondary operation, and that was done to break up adhesions that were interfering with the emptying of the stomach. Relief was complete eighteen months after the operation. Of the 176 cases of primary drainage, eleven patients have been such sufferers as to be willing to have another operation performed. The second operation in ten of these cases was cholecystectomy, with relief finally in all of them, but at least two of these continued to have considerable pain for several months. One of the cases operated a second time did not seem to show sufficient cause for cholecystectomy, and a drainage operation was done. The relief was only partial.

Aside from the eleven patients operated on secondarily for unrelieved or recurrent symptoms, five have been readmitted to the hospital for medical and massage treatment without operation. Two of these patients were relieved, and two received no benefit and are still suffering. The fifth patient has been back twice and each time rest, hot packs, Carlsbad salts, careful diet and light massage have given relief. His last stay in the hospital was only three months ago and it was agreed that if the symptoms returned he would come back for a cholecystectomy. Twelve other patients complained greatly for a time, but as far as it has been possible to ascertain, most of them are better, and at least seven are completely relieved. My records in regard to persistent fistulas are incomplete, but several have not closed for from three to six months after operation. One of these was still discharging almost a year after discharge from the hospital, but as there was no pain and the general health of the patient was excellent, the woman would not consent to another operation.

Tubal Sterilization

DR. LAWRENCE W. LITTIG, Davenport, Ia.: Animal experiments, the ligation or excision of pathologic tubes, and the results of like operations on normal tubes prove conclusively that tubal ligation, with or without excision, is not an efficient measure to prevent conception. The only operation which gives a promise of success is excision of all or a part of the tube, with a deep wedge-shaped excision of the uterine cornu, including the *para uterina* of the tube, the uterine defect to be closed with a musculomuscular, and a seroserous row of sutures. Granting that the state has the right to sterilize its mental and moral delinquents, tubal ligation, as legalized in Iowa, considering its remote possibility of success, and its ever-present, although vanishing danger, is an unjustifiable operation, entirely without promise as a means to lessen the procreation of the unbalanced.

Chronic Brain Abscess of Traumatic Origin

DR. WILLIAM JEPSON, Sioux City, Ia.: Among six cases of chronic brain abscess of traumatic origin submitted to operation, there was one recovery among three cases due to gunshot wounds, and two recoveries among the other three cases of fractures produced by means other than missiles. In all cranial fractures assuming the type of puncture wounds, there exists a great tendency to the production of a chronic abscess. This is an encapsulated infection, and as long as it remains so there are no symptoms. When the capsule gives way, however, converting a latent into a potential infection, symptoms indicative of acute inflammation follow. The danger of infecting the arachnoid space should be guarded against by a not too rapid escape of the pus.

The Choice of Technic in Enterostomy Incident to Operations for Intestinal Obstruction

DR. JOHN P. LORD, Omaha: The drainage of the bowel in chronic as well as in acute obstruction makes for safer surgery. Venting by an enterostomy tube in uncertain or insecure sutures, especially in complicated cases in resections of the large intestine, removes the element of gas distention and allows rest to the bowel, a necessary condition to insure primary union. The technic which I favor is practically identical with an E. J. Senn gastrostomy. Leakage has never been troublesome, and in the case of all patients who survived, closure was complete in a short time. The simplicity and safety of the method favored makes the indications for enterostomy more frequent, and if it were more often used, and if it had a more general early application it would make for safer and more satisfactory intestinal surgery incident to operations for obstructions.

Infection of the Retroperitoneal Lymphatics

DR. JAMES E. MOORE, Minneapolis: Owing to the inaccessibility of these parts, infections and even abscesses often occur here that are not recognized. When there is an infection here, the intestines usually become distended, which adds to the natural difficulties of examination; when chills, fever and sweating are present, the cause of which is not found in any of the usual locations, or when the symptoms continue after thor-

V. 191

ough drainage of pelvic or abdominal abscesses, the retroperitoneal space should be suspected. It is quite possible that in many instances where patients have died from sepsis without the abscess having been discovered, it was located in this region. The presence of tubercular abscesses in this location has been very frequently recognized. The reported causes of nontubercular abscesses in the retroperitoneal space are typhoid, appendicitis, salpingitis, infection following abortion and parturition, and suppuration of the inguineal lymph-nodes. In some cases following parturition infection has manifested itself as late as three months after labor. A few cases have been reported without apparent cause. My experience is limited to four cases, the first two occurring years ago before laboratory facilities were at hand.

Failure of the Colon to Rotate

DR. CHARLES H. MAYO, Rochester, Minn.: The relative rarity of these obscure intra-abdominal abnormalities, and the fact that they so infrequently give rise to definite symptoms, explains, in part, why a diagnosis is so seldom made. Within the abdomen congenital deformities are so efficiently concealed that only a small percentage of them are found until adult life is reached, and then only at operation or necropsy. Because of congenital or acquired openings in the diaphragm, much of the colon with other abdominal viscera may be located in the pleural cavity. A partial rotation may leave the cecum at any point between the normal and the right under-liver position, or the left umbilical or left pelvic position. In the event of such abnormality, there may be failure to find the appendix at operation, and the congenital position should be considered probable when no colon is found on the right side, and positive if the duodenum is found uncovered by colon and with a mesentery. Failure of the colon to rotate should be considered as a possible cause in cases of obscure inflammatory conditions in the left or middle pelvis, or in the left iliac fossa. Approximately three hundred cases of complete transposition of the abdominal viscera have been reported in the literature. In six cases observed at St. Mary's Hospital we operated three times for left-sided appendicitis, twice in acute abscess. Very little is found in the literature as regards failure of the colon to rotate, although it is undoubtedly a condition which should be considered as more frequent than complete transposition. The condition may be found described under various anomalies of the duodenum as well as of the colon. We have observed five of these cases during the past two years in operating on the abdomen, and in only one of the cases was the abnormality diagnosed before operation.

Tuberculosis, Solitary and Apparently Primary, of the Fallopian Tubes

DR. ALBERT J. BURGE, Iowa City, Ia.: I have seen two cases of tuberculosis of the Fallopian tubes. The sections in each case showed well-marked tuberculosis in the partially destroyed or degenerated mucous and muscular walls, with distinct giant cell formation. The future will recognize distinctly the tendency of the female adnexa to develop primary tuberculosis as does the epididymis of the male. If so, what shall be the treatment? Will it be the same vigorous, radical and summary course which the analogous disease in the male merits and now receives? In view of the added dangers of an intraperitoneal location in the female, I venture to say that it will, saving the ovaries when free and safe, but in nowise temporizing with the tuberculous tubes.

DISCUSSION

DR. JOHN B. MURPHY, Chicago: Dr. Burge's paper has interested me from several standpoints. First, from the pathologic findings; second, from the clinical history; third, from the association of this lesion with hemorrhages from the uterus, and, fourth, from the surgical treatment. The reason for the deposit of tubercle bacilli in a tube is not definitely settled. Whether it is of hematogenous origin in the tube, or of hematogenous origin in the vas deferens, the epididymis, is a question. It is my belief that infection in a tube occurs more commonly through the peritoneum or through the uterus, and that tuberculosis of the uterus is a more frequent lesion than is generally believed. Both of Dr. Burge's cases show evidence of mixed infection, and not a pure infection. When there is a pure infection of the tube, the fimbriated end is open. It is the only type of infection of the tube that retains the patency of the tube during the inflammatory process. In the other types of infection of the tube the tendency is at once to closure of the tube by agglutination to the neighboring structures. Where a tube remains open, the clinical course is almost identical with that of recurrent appendicitis. A patient will have a period of relief, in fact, of good health, followed by a sudden attack of pain, nausea and vomiting, local sensitiveness, elevation of temperature, and often a discernible effusion into the peritoneal cavity. Examination through the vagina or through the rectum usually shows a thickening of Douglas' pouch in the class of cases of the type I have mentioned. In the type of case the doctor has reported here, once the tube becomes closed, it does not give the recurrent appendicitis syndrome of symptoms as does the open fimbriated end. Perforation of the tube on the side of tuberculosis, as mentioned in the doctor's paper, is not uncommon. When it does occur, it causes a limited peritonitis which usually rapidly circumscribes itself and undergoes repair. The peritoneum has such greater resistance against tuberculosis than any other tissue in the body that it rapidly heals up. In the treatment of these cases, removal of the tube with the encapsulation of the end suffices for the cure of the local conditions, and not only that, the extensive peritonitis that may have resulted from repeated attacks of leakage from the end of the tube entirely repairs.

The Present Status of Surgery for Cancer of the Breast

DR. E. S. JUDD, Rochester, Minn.: Tumors of the breast may be divided into two groups, benign and malignant. So far as we know at the present time, a differentiation other than microscopic cannot be made between a benign tumor and a very early malignant one. They should all come under the same line of treatment, namely, radical excision of the malignant tumors, and removal of the tumor followed by radical excision if the growth proves malignant in the supposedly benign type. Age is no longer considered an important factor in determining malignancy. While it is true that the muscles are seldom involved as compared to the fascia; at the same time, we have recently observed several cases in which the lymphatics penetrating deep into the muscle were extensively involved. The frequency with which mammary carcinoma produces metastases in the bones is well known. The sternum and ribs are the most frequently involved, and this occurs by direct extension. The femur, bones of the spine and humerus come next in the order of frequency. It is often advisable in cases of cancer of the breast to have roentgenograms made of the bones most frequently invaded, since it is obviously useless to remove the breast should one of these bones be involved.

Two hundred and sixty-four cases of carcinoma of the breast have been observed in the clinics at St. Mary's Hospital within the past two years. Of this number, two hundred were considered operable and sixty-four inoperable. In order to make an early positive diagnosis, it is necessary to remove for macroscopic and microscopic examination all supposedly benign and doubtful neoplasms. The technic of radical amputation of the breast has changed but little in the past few years. A large amount of skin, equidistant in all directions, should be removed. The most important part of the technic is the removal of a very extensive part of the superficial and deep fascia. This dissection must begin above the axillary structures, include the pectoral muscles and fascia of the axilla, and extend down over the rectus muscle, taking in a part of its fascia. In removing the pectoralis major the fascial excision is carried to the sternum and from there outward to the large muscles of the back. If there are many skin nodules, or if the integument is brawny and edematous, although the local lesion can be entirely removed, in all probability there are internal metastases or bone lesions and the condition is hopeless.

The prognosis as to the probability of a cure in a case of carcinoma of the breast will depend (1) on the length of time the neoplasm has been developing; (2) on the degree of outlying involvement; (3) the activity of the gland which will be determined by the age of the patient and the relation to a period of lactation, and (4) the thoroughness of the removal of the gland-bearing fascia.

SOUTHERN SURGICAL AND GYNECOLOGICAL SOCIETY

Twenty-Fourth Annual Meeting, held in Washington, Dec. 12-14, 1911

(*Continued from page 59*)

Benign Tumors of the Stomach

DR. EDWARD A. BALLOCH, Washington, D. C.: My patient was a woman, 56 years of age. There was a history of a severe fall twenty years before, when the left side was severely injured; vague dyspeptic symptoms for several years, principally pain and nausea. The pain was worse after the menstrual periods. Enlargement of the abdomen was first noticed December, 1910. This had increased steadily, and, at the same time, the pain and nausea had grown worse. Examination showed a mass in the lower left quadrant, having the general size and shape of a kidney. It could be pushed into the left kidney region without difficulty, but resumed its original position when pressure was removed. A diagnosis of wandering kidney was made and the patient sent to the hospital for operation. After she was anesthetized a further examination was made, when it was found that the mass could be pushed all over the abdomen. The diagnosis was then made of omental cyst or a pelvic tumor with a long pedicle. After opening the abdomen the growth was found to spring from the greater curvature of the stomach. It was removed without difficulty and the patient made a rapid recovery. Pathologic examination showed the growth to be a soft fibroma.

Pyloric Stenosis Due to Overgrowth of Scar Tissue

DR. W. M. JORDAN, Birmingham, Ala.: Non-malignant new growths in the pyloric end of the stomach are much more common in the negro race than in whites. I have not observed a single case of this character in a white person, but have met with five cases in negroes. There were two men and three women, whose ages were respectively, 28, 29, 38, 45 and 55. All gave stomach histories more or less suggestive of ulcer preceding the onset of obstruction. The smallest growth, the one which was resected, was about one inch in diameter, while the largest was as broad as the hand. In every case the tumor was situated on the stomach side of the pylorus. In all but one the growth merged with the pyloric ring at one end and presented a sharply defined border at the other. The peritoneum overlying the growths was apparently normal. When the stomach was put on the stretch, as in lifting it out of the incision, the gastric wall overlying the tumor assumed a whitish, bloodless appearance, which made it easy to demonstrate the outline of the growth. In one case the operation was a partial gastrectomy, while a posterior gastrojejunostomy was done in the other four. Complete relief was noted in every case.

DISCUSSION

DR. JAMES E. THOMPSON, Galveston, Tex.: It has occurred to me that we might classify these cases more correctly as cases of myoma. Three years ago I read a paper on myoma of the stomach and collected a number of such cases. I found at that time that myosarcomata were moderately common. They are extremely common in horses.

DR. JAMES E. MOORE, Minneapolis: In speaking of tumors of the stomach, or tumors of the character under consideration occurring in unusual places in the abdomen, it is well to bear in mind the possibility of their being parasitic growths, that is, having been original growths from the uterus, ther have become attached to the other viscera, and later Nature makes a separation. Many such cases are on record.

DR. E. A. BALLOCH, Washington: At first, I was very much of Dr. Thompson's opinion that this tumor looked very much like a sarcoma. But it was pronounced by the pathologist as a fibroma, as there were no muscular elements in it. I had difficulty in conceiving how a soft fibroma could occur in that locality.

Postoperative Gastric Dilatation

DR. T. C. WITHERSPOON, Butte, Mont. In three of my cases a marked dilatation of the stomach existed without obstruction. No portion of the intestinal tract was similarly dilated. There was no infection of the surgical field, and visceral union was perfect. Unlike the case recorded in my former paper, there was good union in the parietal wounds of the last two. Neither of these patients suffered pain about the epigastrium as did the first patient. I am impressed with the idea that in the former the segmental trophic disturbance manifested itself in both visceral and somatic nerves, while in the latter case in the visceral nerve distribution alone. In all three cases the paralysis of the stomach, the freedom from mechanical interference with movements of and emptying of the organ, the purely local nature of the dilatation, the lack of any demonstrated wound infection, and the distinct segmental character of the trophic disturbance seen in the first patient seemed to point distinctly to a central paralysis.

Twice in the last two years I have had an opportunity to demonstrate the distinctly protective value of colon bacilli vaccination before operating. The two patients had had abdominal operations before, and each suffered seriously from vomiting and gastric dilatation, which necessitated lavage and they both suffered likewise from urine shut off for twenty-four or forty-eight hours. Both feared a second operation, especially as the nature of the procedure was to be more serious. I thought it wise to at least immunize against the common source of bowel intoxication and therefore vaccinated against the colon bacillus until two hundred million caused no reaction. The result was a recovery after operation, without nausea of meteorism in any part of the intestinal tract. While the two instances demonstrate nothing of scientific value, they nevertheless point a way and open a field for inquiry.

Lymphatic Edema and Elephantiasis

DR. ALBERT VANDER VEER, Albany: I saw a case of lymphatic edema, possibly congenital, in a woman, 40 years of age. Careful attention was given to her general health, as much rest as possible advised, and pressure, by means of bandages, was applied from the toes up to the groin. This afforded relief, but when removed the general edema would return. Operative intervention was not attempted at any time. The second case was of elephantiasis in a woman, 72 years of age. Case 3 was one of marked lymphatic edema of the left arm extending from the finger tips to the shoulder following an operation for the removal of the left breast. Case 4 was one of lymphatic edema of the right leg. Ligation of the femoral artery in Scarpa's space was performed. The patient did well, but there was not much diminution in the size of the leg or permanent improvement. A year later ulcers appeared and amputation was done through the middle third of the thigh. Patient convalesced nicely and was much more comfortable afterward, but ligation of the artery did not bring the desired relief.

Indications for Abdominal Cesarean Section in Eclampsia

DR. JOHN F. MORAN, Washington, D. C.: I have collected fifty-three cases, including four of my own, operated on from 1901 up to the present time. Seventeen mothers died, a mortality of 32.32 per cent. Forty-five infants were born alive, seven were stillborn and four are not mentioned. Altogether 116 cases have been reported with a maternal mortality of 40 per cent. While the statistics of the last decade show a marked improvement over the previous one, the mortality still is far above the general death-rate of eclampsia. A careful analysis of the cases, however, shows that many of the patients had been subjected to other methods of treatment and were moribund at the time of operation. Abdominal and vaginal Cesarean section are not proposed as substitutes for the other methods of intervention in eclampsia, but the claim is made that they have a well-defined field of application in certain cases of eclampsia. If they are to have an established place in the treatment of this complication, the indications for which they are urged must be met by prompt elective action, for to delay until the patient is *in extremis* and all other treatment has failed, is to invite disaster.

The Lane Operation

DR. JOHN YOUNG BROWN, St. Louis, Mo.: During the last three years I have operated in sixteen carefully selected cases

of this type. In all of these cases a diagnosis has been arrived at by a process of exclusion, and in each intestinal stasis has been demonstrated by means of the bismuth meal prior to operation. Fourteen patients presented well-defined pericolic membranes and in all there was present kinking of the ileum. In two of the cases the condition found at operation was undoubtedly due to primary involvement of the appendix. In nine of these cases the constipation and the symptoms of intestinal toxemia have been entirely relieved, the patients gaining in weight and showing marked general improvement. In five of the fourteen cases, while the improvement has been satisfactory, much annoyance has resulted from gaseous distention and pain in the excluded cecum and colon. It cannot be too strongly emphasized that neither the Lane operation nor any of the suspension operations should be undertaken unless there are well-defined demonstrable pathologic lesions justifying their performance. All so-called atonic and neurasthenic types of enteroptosis will yield far better results if given proper rest, hygienic and dietetic treatment.

The End-Results of Operations in Exophthalmic Goiter

DR. GEORGE W. CRILE, Cleveland: In studying the end-results of my patients, I have made several generalizations. No patient died of the disease after leaving the hospital; no patient was made worse by the operation; every patient was either benefited or cured. Among the factors that influenced the end-results were the environment of the patient, the freedom from nervous shocks, the means at hand for diversion as well as the avoidance of strain. The elimination of all nervous shock at the time of operation has proved a good clinical asset. The improvement began usually the next day after the operation and continued for from six months to two years. I regard patients as cured when they are able to withstand nervous shocks such as fright, disappointment, worry, etc., in a normal manner. I have found that the time required for a complete cure is dependent on the environment of the patient.

Omentopexy in Cirrhosis of the Liver

DR. H. H. GRANT, Louisville Ky.: I have collected 144 cases from the literature, of which seventeen patients or about 11 per cent. died following the operation. Seventeen or 11 per cent. are reported as cured; sixty-four or about 44 per cent. improved, and thirty-two or 22 per cent. are unimproved.

Primary Sarcoma of the Gall-Bladder

DR. R. S. CATHCART, Charleston, S. C.: My patient, a man, was 45 years of age, fairly developed, but had a slight cachectic or septic look. Operation revealed the case to be one of primary sarcoma of the gall-bladder. Its surgical interest is only that the patient is alive and in good health, doubtless due to operation at an early stage.

Amputation for Congenital Gangrene

DR. RANDOLPH WINSLOW, Baltimore, Md.: I wish to report a case of congenital gangrene of the right forearm, with successful amputation, in an infant five days old. The ability of a frail child of that age to undergo such a mutilating operation, without an anesthetic, is also noteworthy. It is possible that an anesthetic might have been well borne, but I feared to attempt it. The attending physician stated that no pressure by the cord or bands was present. The gangrene was not of the dry or anemic type, but was more of the obstructive type. The forearm and hand were swollen, discolored and offensive.

The Matas Operation in the Treatment of Traumatic Aneurysm

DR. WALTER C. G. KIRCHNER, St. Louis, Mo.: I have had four cases of aneurysm of traumatic origin. In the first case the aneurysm resulted from a gunshot wound of the brachial artery, and was of the fusiform type. Instead of employing obliterative endo-aneurysmorrhaphy, after extirpation of the sac, a biterminal vein transplantation was performed with a satisfactory result. In the second and third cases, large sacciform aneurysms resulted from stab injuries of the brachial artery. The cases were well adapted to the Matas operation, and in each instance good functional use of the extremity was obtained. The fourth case, a sacciform aneurysm of the femoral artery, was interesting on account of the location of the aneurysm below Poupart's ligament, its great size, and the fact that the sac contained a broken knife-blade 2 inches long. A restorative operation was performed, after preliminary retroperitoneal clamping of the external iliac arteries. The patient made a good recovery and was able to attend to his usual occupation.

What Can Surgery Do for Gastro-Enteroptosis?

DR. JOSEPH RANSOHOFF, Cincinnati: Every case of gastro-enteroptosis should be studied individually and should not be treated in a routine way, whether by medicine or operation. In many seemingly hopeless cases of gastro-enteroptosis with marked neurasthenic symptoms, operation promises relief. If this is the result of suggestion, it is none the less valuable if the relief is permanent. Whereas, of course, internal treatment, abdominal supports and postural treatment should be tried, operative interference should not be delayed unnecessarily lest the habitus nervosus becomes too deeply rooted to be eradicated. No gastroptotic patient should be operated on unless some actual functional disturbance can be demonstrated. To relieve this must be the aim of the operation. Given a gastroptosis in which we can demonstrate distinct functional incompetence or deviations, the existence of nervous phenomena does not militate against operation, but may be the chief reason for performing it.

Interstitial Ectopic Pregnancy

DR. CHARLES R. ROBINS, Richmond, Va.: In 1,324 cases of ectopic pregnancy collected from literature by Rosenthal, there were less than 3 per cent. of the interstitial variety. My patient is 27 years of age, colored, tripara; one miscarriage. Her last menstruation occurred in June, since which time there has been no bloody discharge. In the early part of July she was taken with sharp pains in the lower abdomen, worse in the right iliac region. After this, for a while, she would have a severe attack of abdominal pain at night, felt on both sides and radiating to the shoulder on the right side. She later would have recurring attacks and a few days after an attack could feel a mass in the right side. She was confined to bed for five weeks and then got up for four or five days, when she had another severe attack and was forced to return to bed. Her pains were severe all over the body; she had a cold sweat and a chill. At this time the pain settled in her right side and has remained there constantly ever since. She has suffered from marked constipation for four months. Urination is frequent and burning. At the time of the examination she had a temperature of 101 F. The patient was quite fat, but a tumor could be made out in the lower abdomen half way up to the umbilicus. The recti muscles were somewhat rigid, and there was marked tenderness over the right iliac area. On bimanual examination the uterus was made out, although not sharply defined, the enlargement being greater on the right side. The size of the uterus corresponded to about a three-months' pregnancy. There was no bloody discharge and the patient said that she had had none since June. A diagnosis of ectopic pregnancy had been made but the possibility of an appendicitis complicating pregnancy was considered. There was a leukocytosis of 17,000, but no differential count was made. On September 7 an exploratory McBurney incision was made and the abdomen found full of fluid blood. A median incision was then made, the clots cleaned out of the pelvis and the uterus delivered. The right side was found enlarged with several points of rupture, and with the membranes showing through. The uterus was removed by a supravaginal hysterectomy.

Section of the specimen shows an unruptured sac with hemorrhages between the membranes and the walls of the gestation cavity, the chorionic villi well developed, and a perfectly formed embryo. The tube on the right side and the cavity of the uterus are both intact, the latter containing a well developed decidua. The case is unusual in not having had uterine bleeding at any time.

Book Notices

THE MECHANISM OF LIFE. By Dr. Stéphane Leduc, Professor à l'Ecole de Médecine de Nantes. Translated by W. Deane Butcher, Formerly President of the Röntgen Society, and of the Electro-Therapeutical Section of the Royal Society of Medicine. Cloth. Price, $2. Pp. 172, with 64 illustrations. New York: Rebman Company, 1911.

The views of the author have been much discussed in France and for the most part adversely. He turns to England, hoping that English-speaking men with more liberal minds will give life to his ideas as they did to those of his countryman Lamarck. The author attempts to present the phenomena of osmotic growths of chemical substances in analogy of form and phenomena to living things, so that they will convince one that in osmotic growths we have the origin of life. The book is well worth reading, but one cannot help feeling that the argument from analogy is forced.

The chapter on artificial cell production by implanting in a solution of certain salts another of different density or concentration is interesting, but more instructive is the chapter on karyokinesis. All of the phenomena of karyokinesis the author reproduces artificially by placing in salt water a drop of the same solution pigmented with India ink and by placing on either side of the latter a hypertonic drop of salt solution more lightly stained. The process of diffusion leads the central drop in succession to produce all the karyokinetic figures. The physical explanation which the author makes of karyokinesis in cells seems probable; that is that it is due to osmotic pressure, exerted by the drops of different density as they gradually diffuse in the surrounding liquid.

The analogy between the shape of osmotic growths of chemicals and plants, shells, corals and various other living things is curious but not convincing of a relationship between them. But the fact that these growths are often built up of artificial cells or what looks like them; that the growths absorb material from the medium in which they are to produce their growth; that the increase in weight manifold at the expense of the medium in which they grow; that a circulation of fluid takes place in these growths; that the chemical substances taken into them are often changed in their composition in order to contribute to the growth and another substance is thrown back into the surrounding medium; that these growths change shape and position because of external stimuli—all these are phenomena strangely like those of life—like the phenomena of nutrition, of assimilation, of sensibility and of growth.

The author tells exactly how his experiments are performed and the results are depicted in numerous illustrations.

DIE PERORALE INTUBATION. Ein Leitfaden zur Erlernung und Ausführung der Methode mit reicher Kasuistik. Von Dr. Franz Kuhn, Elisabeth-Krankenhaus in Kassel. Mit einem Vorwort von Dr. O. Hildebrand, Direktor der chirurg. Klinik in der Kgl. Charité in Berlin. Paper. Price, 5 marks. Pp. 162, with 22 illustrations. Berlin: S. Karger, 1911.

This book not only describes the instruments and method of peroral intubation, but it also considers the indications and anatomic features of the procedure.

Peroral intubation represents an important surgical advance, for it makes it possible to perform extensive and bloody operations on the throat and jaws without danger of blood entering the upper air-passages, larynx, trachea or lungs. Heretofore this danger could be eliminated only by tracheotomy or by placing the patient in Roser's position of the hanging head, which seriously increased the bleeding. Another advantage of peroral intubation is the possibility of tucking the tongue out of the way into the laryngopharynx, where it becomes a tampon against blood entering the air-passages, for with the peroral tube in the larynx, the tongue can no longer obstruct respiration.

Kuhn enters fully into a description of the major operations on the jaws and pharynx in which peroral intubation is used and in addition shows a new route to the sphenoid body obtained by the means of a transverse incision at the junction of the soft palate with the hard palate, which gives a more ready access to the body of the sphenoid bone than can be obtained by the nasal route, which includes the formidable mutilation of cutting away most of the nasal septum.

The chief objection to peroral intubation is the possibility of the tube's slipping out of the larynx during motions of the patient. It must, therefore, be well fastened at his mouth by the rubber tubes mentioned.

With peroral intubation it is possible to do major jaw and pharyngeal operations with the patient sitting upright on the operating-table, a position that minimizes the bleeding and so makes the technic more exact. Where an anesthetic is given through the peroral tube the amount required is far less than when the anesthetic is inhaled in the usual way, and the anesthetizer must consider this, for minimal doses of chloroform or ether are rapidly effective when introduced directly into the bronchial passages.

Without doubt peroral anesthesia will in time be generally adopted as an indispensable procedure, since it makes difficult and bloody operations on the pharynx and jaws far easier and more exact than they are now. Kuhn is to be commended for the clear and convincing way in which he presents his subject.

AUTO-INOCULATION IN PULMONARY TUBERCULOSIS. By Marcus Paterson, M.B., B.S., M.R.C.S., Medical Superintendent at Brompton Hospital Sanatorium, Frimley. Cloth. Price, 21 shillings. Pp. 236. London: James Nisbet & Co., 1911.

This book should prove of interest to all physicians who are concerned with the practical treatment of pulmonary tuberculosis. As indicated by the title, it deals primarily with the application in practice of the hypothesis that tuberculosis may be favorably influenced by proper stimulation of the function of specific antibody formation through auto-inoculation, that is, the absorption of antigenic substances from the tuberculous foci in the lungs. The inducement of adequate auto-inoculation is brought about by means of graduated labor, regulated with scrupulous care and attention to amount and other details. The practical elaboration of this plan, which seems to rest on sound principles, is the author's contribution to the therapy of tuberculosis. The guides to the control of the treatment are the temperature, the appetite, the sputum and the general condition of the patient. In order to reduce excessive auto-inoculation, complete immobilization may have to be enforced. There are also chapters on diet, complications, diagnosis and other phases of tuberculosis and its treatment, including sanatorium administration. The book is a valuable contribution to the treatment of tuberculosis and is cordially recommended. The results obtained by the methods described are encouraging, and the moral value of graduated labor in overcoming the disastrous effects on mental and physical vigor by a sanatorium life merits special emphasis. The volume of 236 pages is printed on thick paper in unusually large type. It is folio post-quarto in size (8½ by 11 inches), but there are twenty-four lines only to the page and the margins are very wide. Why this peculiar form is used is not at all clear. It surely is not the most economical form for a book of this character.

CARBONIC-ACID SNOW AS A THERAPEUTIC AGENT IN THE TREATMENT OF DISEASES OF THE SKIN. By R. Cranston Low, M.B., F.R.C.P., Assistant Physician to the Skin Department, Royal Infirmary, Edinburgh. Cloth. Price, $1.50 net. Pp. 117, with illustrations. New York: William Wood & Co., 1911.

This book is an evidence of the rapidity with which the method of treatment with solid carbon dioxid, introduced by Pusey in 1907, has become established and of the importance which it has assumed in dermatologic practice. Low in this work summarizes the whole subject and furnishes a valuable fund of information on its technic and its practical applications. His experience, based on its use at the Royal Infirmary, Edinburgh, agrees with that of dermatologists generally and covers the class of lesions in which the method has been found useful. He has done a distinct service in bringing all of the experience together in form where it is readily available. The work is practical; its aim is to furnish a working knowledge of the method, and it is a valuable book to any one who wishes to familiarize himself with the application of this simple and convenient means for treating many of the defects of the skin.

Medicolegal

Religious "Healer" an Unlawful Practitioner of Medicine—Requirements of Colorado Statute Explained—State Can Control Practice

(Smith vs. People (Colo.), 117 Pac. R. 612)

The Supreme Court of Colorado affirms a judgment of conviction of a "healer" of practicing medicine without a license. It says that the people's evidence showed that the defendant kept a place of business for healing the sick; that there were signs in the windows reading: "Professor Smith, Healer." "Office hours 9 to 12, 2 to 6"; also a sign on the door: "Professor Smith, Healer." "Walk in." He claimed that his treatment was a natural one—a gift from the Almighty; claimed to restore people to health; said he could cure any disease a medical man could, and many they could not; could cure diarrhea, and stomach, spinal, nervous and throat troubles and pneumonia; mentioned several cases of pneumonia he had recently cured that the physicians had given up; said he diagnosed and treated them without medicine. The defendant testified that he belonged to the church of "The Divine Scientific Healing Mission," a corporation; that he was a preacher of the gospel and a healer of the sick; held services Sunday afternoons at a hall, where he preached and cured the sick; said his church had branches everywhere; he occupied a couple of living rooms, not an office, where he lived and treated the sick and afflicted without the use of drugs or a knife; some he charged, some he did not; never turned any one away; the signs had been there for over two years; did not practice medicine or diagnose diseases; people came to his rooms, told him what was the matter with them, and he treated them; could not tell whether patients had gout, small-pox or rheumatism, but could and did treat and cure them. "Healer" means curing the sick. The certificate of incorporation of "The Divine Scientific Healing Mission"—showing its objects to be "preaching, teaching and practicing the gift of healing, guided and directed by divine power, by laying on of hands, regardless of faith, creed, sect or race, to promote peace on earth, good will to men," also containing the tenets of "The Divine Scientific Healing Missions," as follows: "We believe in healing the suffering humanity by laying on of hands to be the gift of the divine spirit and by sound reason we can comprehend its virtue"—was offered in evidence and excluded by the trial court.

It was the nature of the defendant's business, not the objects of the corporation or the tenets of his church, that was in controversy. The evidence showed that he was practicing medicine within the definition of the statute, and was using the title "healer" to his name to indicate that he was engaged in the business of healing the sick. He treated in his office or place of business, for hire, persons suffering from disease, for the purpose of curing them. He held himself out to the public as a professional healer of diseases, and a practitioner of the healing art. The statute lays hands on commercial healing as a money-making occupation, business or profession, regardless of the method of treatment or curative agency employed. It concerns the public health, and should be liberally construed to accomplish the object of its enactment. It does not belong to that class of penal statutes construed most strongly against the people.

As a protection to the public health, the statute requires those engaged in the business of curing the sick to possess certain qualifications. It is not concerned with the school, sect or system of healing, or the method of treatment. One form of examination is required of all sorts of healers. All applicants must be examined in anatomy, physiology, chemistry, symptomology, toxicology, pathology, surgery, obstetrics. All schools teach these branches, and use the same text-books. They are the fundamentals in which all applicants must be grounded before they can be licensed to follow the business of curing the sick. There can be no difference of opinion among intelligent men on the subjects above enumerated; but there is great difference in regard to treatment. Hence the statute expressly prohibits any examination in materia medica or therapeutics. In the eye of the statute methods of treatment meet on a level as curative agencies in healing human ills. There is no discrimination, partiality or monopoly. It requires, however, that the healer shall possess a reasonable amount of learning before he enters on the business of curing the sick. The discrimination goes to the degree of learning, and not to the school, sect, system or creed. As a protection to the public health, the state fixes the standard of competency, and makes the right to engage in the business dependent on the possession of certain knowledge.

The defendant claimed that he came within the exemption which says: "Nothing in this act shall be construed to prohibit . . . the practice of the religious tenets or general beliefs of any church whatsoever, not prescribing or administering drugs." The constitution provides that there shall be no interference with the "free exercise and enjoyment of religious profession and worship." The statute does not interfere with the free exercise of religion or worship. Any persons, individually or collectively, any minister, or any church congregation may resort to prayer whenever they wish for the healing of the sick. No attempt is made to interfere with religion or religious devotions. This does not, however, authorize one under the cover of religion or a religious exercise to go into healing commercially for hire, using prayer as the curative agency or treatment. Religion cannot be use as a shield to cover a business undertaking. The defendant was engaged in a business venture, not a religious exercise. The practice of medicine, defined by the Colorado statute, means the practice of the healing art commercially, regardless of the curative agency employed. The commercial practice of healing by prayer, followed as a money-making venture or occupation, is the practice of medicine within the plain meaning of the statute. Furthermore, the exemption mentioned in the statute is not descriptive of the offense, and it was not necessary for the people to negative the exemption in the information.

The legislature under the police power of the state could create the state board of medical examiners and fix its powers and duties. The police power of the state relates to the preservation and promotion of the health, safety and morals of the people. The law is settled that the legislature may control the practice of medicine. Such enactments emanate from that branch of the police power of the state having to do with the protection of the public health. The state has the right to determine and define what constitutes the practice of medicine.

Practice of Medicine After Revocation of Certificate—Validity and Construction of Statutes as to Authorizing State Board to Revoke Certificates for Advertising Under False Names and Unprofessional Conduct

(People vs. Apfelbaum (Ill.), 95 N. E. R. 995)

The Supreme Court of Illinois affirms a judgment for $100 rendered against the defendant by the municipal court of Chicago as a penalty for practicing medicine without a license. He had been licensed by the State Board of Health to practice medicine, and his certificate or license had been revoked by virtue of Section 6 of the Illinois medical practice act, for advertising under a name other than his own, and other unprofessional and dishonorable conduct. He attacked the validity of said section on several grounds.

Section 6, the court holds, is not void for uncertainty. It authorizes the refusal of the license for certain specific reasons, and also generally for unprofessional and dishonorable conduct, and provides that the license may be revoked for the same reasons. The reasons particularly named are certain enough, but it would scarcely be possible for the statute to catalogue specifically every act of unprofessional or dishonorable conduct which would justify the refusal or revocation of a license. In any event, the defendant was found guilty of the specific offense of advertising under another name than his own, and as to that charge the statute is not uncertain.

The medical practice act, containing Section 6 above mentioned, was passed in 1899. On May 11, 1901, an act of two sections was passed, providing that it should be unlawful for

V. 58
1912

any physician to practice medicine in another physician's name, or to hold himself out as another physician by advertisement, for the purpose of imposing on or defrauding any other person, under penalty of fine and imprisonment. It was insisted that this act modifies, and by implication repeals, that part of Section 6 of the medical practice act which prohibits advertising by a physician under a name other than his own. A later act will not be held to repeal a prior statute, unless the two cannot be reconciled. There is no such inconsistency between these two acts that both cannot stand. The one deals with the case of a physician who practices under a false name, whether that of another physician or not, and without regard to his motive, the penalty for which is the refusal or revocation of his license. The other deals with the physician who for fraudulent purposes practices under the name of another physician, or holds himself out as another physician; the penalty being fine and imprisonment. The one act deals with the licensing of physicians to practice, and does not create or define any criminal act; the other deals with the practice of physicians, and declares that certain acts shall constitute criminal offenses.

Neither the granting nor the revocation of a license to practice medicine is the exercise of "judicial power," as that term is understood in reference to the distribution of the powers of government. It was not contended that the state has not the power to prescribe the qualifications of physicians practicing medicine and to punish unqualified persons engaging in such practice, and the existence of such power is not debatable. The possession of the required qualifications must be ascertained by some authority, and the legislature has imposed this duty on the State Board of Health. In the administration of the law the State Board of Health necessarily exercises discretion and judgment in determining whether or not an applicant possesses the required qualifications, and to that extent its action is judicial in character, but it is not the action of a court or action appropriate for a court. It is similar in its nature to the acts of assessors in valuing property for taxation; of boards of review in reviewing such valuations; of clerks of courts and of sheriffs in approving bonds taken by them; of commissioners of highways in laying out and opening roads; of city councils in granting or revoking licenses to keep dramshops, or of superintendents of schools in granting or revoking teachers' certificates. In none of these cases does the tribunal engaged in the execution of the law exercise judicial power within the meaning of the constitution.

This court has never passed on the power of the State Board of Health to revoke its certificates, though the existence of such power was plainly intimated in People vs. McCoy, 125 Ill. 289, and State Board of Health vs. Ross, 191 Ill. 87. The revocation of the license is not intended as a punishment for any offense committed, but for the protection of the public by the police power of the state. The statute has declared certain acts to constitute a disqualification for the practice of medicine, and, when one has been ascertained to have done those acts, the body which is charged with the ascertainment and determination of the qualifications to practice medicine may deprive him of his license, either by refusing it or revoking it, as the circumstances may require.

The part of Section 6 which makes advertising under a false name a reason for refusing or revoking a certificate does not violate Sections 1, 2 or 4 of Article 2 or Section 22 of Article 4 of the state constitution or the fourteenth amendment of the federal constitution. A citizen may advertise his business in any legitimate manner, but it is a legitimate exercise of the police power in protecting the public against the deception and fraud practiced by irresponsible and quack doctors to require every physician to have the license of the State Board of Health granted in his own name, and to practice or advertise under no other.

Due process of law does not necessarily imply judicial proceedings. Orderly proceedings according to established rules which do not violate fundamental right must be observed, but there is no vested right in any particular remedy or form of proceeding. A general law, administered in its regular course according to the form of procedure suitable and proper to the nature of the case, conformable to the fundamental rules of right and affecting all persons alike, is due process of law.

The power of revocation given to the State Board of Health is not arbitrary or beyond the investigation of the courts. The board cannot, from mere caprice or without cause, revoke a certificate fairly issued on sufficient evidence of the applicant's qualifications. The statute itself requires notice and a hearing before any certificate can be refused or revoked.

The record of the State Board of Health showed that the defendant, on notice given him, appeared before the board and a hearing was had on charges of advertising under another name than his own, and of using the United States mail for fraudulent purposes. The notice was given by the State Board of Health, and required the defendant to show cause why the certificate issued to him by the board and authorizing him to practice medicine should not be revoked for the unprofessional conduct particularized in these charges. It sufficiently appeared from this notice that the charges were made against him in his profession as a physician. He did not ask for a more specific charge, but admitted that he had advertised under the name of Dr. Hoffman. The board found him guilty under both charges, and revoked his certificate for unprofessional and dishonorable conduct. This record showed a specific charge, notice, hearing and the determination of the board thereon, and was sufficient to sustain the action taken.

In regard to the objection that Section 9, which makes it penal to practice medicine "without a certificate issued by" the State Board of Health, does not apply to the case of one who has had a certificate issued to him, it seems sufficient to say that one whose certificate has been revoked is without a certificate as much as one to whom no certificate was ever issued.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

December, VIII, No. 6, pp. 717-880

1 Experimental Study of Pain Sense in Pleural Membranes. J. A. Capps, Chicago.
2 *Relation of Papillary Muscles to Mitral Regurgitant Murmurs. W. T. De Sautelle and E. G. Grey, Baltimore.
3 *Tetanus. E. W. Hill, Colon, C. Z.
4 *Comparative Investigation of Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin. J. A. Waddell, Charlottesville, Va.
5 *Leukocytic Enzymes in Leukemia in Neutral Media. R. S. Morris, St. Louis, and T. R. Boggs, Baltimore.
6 Coagulation-Time of Blood as Affected by Various Conditions. M. Solis-Cohen, Philadelphia.
7 *Tumors of Pineal Body. P. Bailey and S. E. Jelliffe, New York.

2. **Papillary Muscles and Mitral Regurgitant Murmurs.**—As a result of their study the authors arrive at the conclusion that the two papillary muscles play the most important rôle in the transmission of the insufficiency murmur from the mitral valve to the apex. The transmission of the murmur toward the apex apparently depends only in small part on the thickness of the ventricular wall. The papillary muscles must be intact to conduct the murmur. The papillary muscles conduct regurgitant murmurs to whatever portions of the heart they may be attached. The vertical direction of the fibers of the papillary muscles accounts in great part for the conduction of the murmur by these structures. The chordæ tendineæ transmit the murmur from the mitral segments to those portions of the heart into which they may be inserted. If the tissues intervening between the heart and the chest-wall play any part in conducting a murmur from the auriculoventricular junction to the mitral area, it is so slight as to be negligible. The murmur heard in the left axilla in mitral regurgitation is evidently due to the proximity of the anterior papillary muscle to that region.

3. **Tetanus.**—In considering the subject of tetanus, Hill says, we are struck by the fact that it is a disease that has been recognized for centuries, widely diffused throughout the world, found during all periods of life save the first five years, except-

ing the primary month; varying in mortality, age incidence, occurrence during the season of the year, and susceptibility of the sexes; a disease having an extensive literature, the data of which as to frequency, mortality and prognosis are singularly indefinite and unsatisfactory, giving rise to conclusions and statistics both unreliable and confusing. The error, according to Hill, is due in large part to the persistent disregard of certain clinical characteristics and natural tendencies of the disease as exhibited in incubation, progress and duration, unmodified by any treatment whatsoever. Recovery from tetanus once developed is to-day, as in the past, due more to the character of the attack than to the remedies employed. Consecutive data of actual mortality, covering a long period of years, and a large number of cases confined to the same geographical area, should present information as to frequency, age, sex, season of the year and modification by climate, if any. Tetanus is a comparatively rare disease, due probably to peculiar biologic and chemical properties of its bacillus. In the two great classes into which tetanus can be divided, tetanus of the tropics and tetanus of the temperate zones, all the clinical forms of the disease appear, but with marked differences, which will be noted in their proper places. The original article should be consulted for details of Hill's studies.

4. **Sodium Salicylates.**—No differences were detected by Waddell between the brands of natural and synthetic salicylate examined, although the synthetic samples were the cheapest obtainable on the market. The method employed by Waddell in this comparison of the natural and synthetic salicylates consisted in administering the drugs to animals in definite dosage per kilogram and observing the symptoms produced by the smallest effective, lethal and intermediate doses of the one as compared with those of the other. In all cases the drug was administered hypodermically, 0.9 per cent. saline being the solvent employed. For cats, a 10 per cent. solution was used; for rats, a 20 per cent.; and for rabbits, a 35 per cent. Both fractional and single dosage were tried. Every precaution was used to secure exactness of dosage. All the cats used were in good physical condition; they were kept during the course of the experiments in wire cages. Seventeen animals were experimented on, divided into five groups of different dosage, some of each receiving the synthetic and others the natural. The most characteristic symptoms noticed were vomiting, increase of reflexes, extreme weakness, convulsions and death. Vomiting, occurring in the case of every cat except one, was a very early symptom and was produced in from twenty minutes to one and one-half hours in 90 per cent. of the animals. Whether early or late bore no relation to the kind of salicylate or the dose given. Repeated examination failed to reveal the presence of salicylates in the vomitus. Salicylates may, therefore, produce emesis by a central action.

These five series of experiments show that the synthetic and the natural salicylates affect cats essentially alike. The rats used in these experiments were common, wild rats. Thirty-six of these animals were used, being divided into seven groups receiving different dosage, some the synthetic, others the natural. The most striking symptoms noticed were increase of reflexes, stupor, salivation, convulsions and death. However, only the last two were what may be called characteristic; the others being of variable occurrence. The phenomena of death were the same as in the cat. The sphincters were usually relaxed; the lips were blue and covered with froth. The rabbits used were tame ones. Twenty-seven experiments were performed on these animals, divided into six groups receiving different dosage, some the natural, others the synthetic. The most striking symptoms were extreme weakness, convulsions and death. As a rule the animal showed few symptoms. The earliest effect was a loss of appetite; and if profoundly affected, the animal ceased to be playful or to take notice, having a tendency to stay by itself. In only a few cases was there an evident increase in reflexes as evinced by tremor and sensitiveness to sound.

Except loss of appetite and salivation, which were present in all the animals experimented on, early symptoms were constantly present and unmistakable only in the case of the cats. Anorexia was present in all cats, almost from the moment of injection, no matter how small the dose. Emesis occurred in 94 per cent. of all cats. Increased reflexes were present in 94 per cent. Convulsions occurred in 76.5 per cent. Convulsions occurred in 43 per cent. of all rats receiving doses of 0.5 gm. per kg. and higher; and never with 0.35 gm. per kg. In the rabbits convulsions occurred in 37 per cent. with a dosage between 2.93 gm. per kg. and 1.0 gm. per kg.; 15 per cent. within the same range of dosage died without convulsions. Cats proved to be very susceptible to the salicylates; the mortality was 100 per cent. with a dosage of 1.4 to 0.8 gm. per kg. Rats proved to be very suitable animals, giving uniform results. Rabbits gave the most inconstant results obtained from any of the animals.

5. **Leukocytic Enzymes in Leukemia in Neutral Media.**—In six cases the leukocytes were tested by Morris and Boggs for the presence of the following types of endo-enzyme: protease, lipase, amylase, maltase, invertase, lactase, a glycolytic enzyme and oxidase. Since the number of ferments tested for was comparatively large and the quantity of leukocytic suspension at their disposal relatively small, it was impossible to study the effects in more than one reaction. It was, therefore, decided to limit the observations for the present study to possible action in neutral mediums. They found that a protease is present in the lymphocytes of chronic lymphoid leukemia and in the leukocytes of acute and chronic myeloid leukemia and of pus. Lipase occurs in the white cells in the same conditions. It is shown that amylase is contained in the granular leukocytes of pus and of myeloid leukemia, acute and chronic, and in the lymphocytes of chronic lymphoid leukemia. Maltase is likewise a product or constituent of these cells. Digestion of saccharose, lactose and glucose by myeloid or lymphoid cells has not been observed in neutral mediums. Oxidase is demonstrable in the leukocytes in conditions in which the granular cells of the marrow are present in large numbers. Biologic differences between myeloid cells and the lymphocytes of chronic lymphoid leukemia have not been demonstrated in neutral mediums. The authors believe that it is a legitimate inference that in part, at least, the enzymes of the plasma may be derived from the leukocytes.

7. **Tumors of Pineal Body.**—The authors give an account of the pineal syndrome, report a case of teratoma of the pineal gland and give abstracts of all previously recorded cases of pineal tumors.

Kentucky Medical Journal, Bowling Green

November 15, IX, No. 22, pp. 859-890

8 Value of Routine Estimations of Blood-Pressure. E. F. Horine, Louisville.
9 Variation from Common Type of Scarlet Fever; Report of Cases. E. F. Katzmann, Louisville.
10 Ossification of Capsule of Tonsil in Adult. W. C. White, Louisville.
11 Large Umbilical Hernia, Containing Omentum, Intestine and Liver, in Child 7 Months Old; Operation, Recovery. E. S. Allen, Louisville.
12 Total Obstruction of Intestine Due to Cancer of Sigmoid and Constricting Band. B. Asman, Louisville.
13 Cancer of Mesentery. G. A. Hendon, Louisville.
14 Appendicitis Associated with Pregnancy. J. R. Wathen, Louisville.
15 Hernia of Parotid Gland Following Trauma. J. R. Wathen, Louisville.
16 Malarial Hemoglobinuria. F. C. Askenstedt, Louisville.
17 Stiff and Painful Shoulder, Including "Baseball" or "Glass" Arm. J. J. Morvn, Louisville.
18 Hydrophobia. O. E. Bloch, Louisville.
19 Tuberculosis. S. E. Hampton, Melton.
20 Diagnosis and Treatment of Gastric Ulcer. C. V. Hiestand, Merrimac.

December 1, IX, No. 23, pp. 891-946

21 Version. E. Speidel, Louisville.
22 *Indications for and Application of Axis-Traction Forceps. D. Caldwell, Paducah.
23 *What Physician Can Do for Diseases of Women in His Office and at the Bedside. G. J. Herman, Newport.
24 *Indications for Prostatectomy. F. Boyd, Paducah.
25 *State Institutions and a Plea for More Perfect Equipment. H. P. Sights, Hopkinsville.
26 *Expert Testimony in Courts of Law. D. S. Reynolds, Louisville.
27 *Surgical Treatment of Goiter. J. R. Wathen, Louisville.
28 Diagnosis and Treatment of Acute Mastoiditis. D. M. Griffith, Owensboro.
29 Radical Mastoid Operation; Its Indications and Results. A. O. Pingst, Louisville.
30 *Care of Insane Criminal. M. Board, Louisville.

22, 23 and 24. Abstracted in THE JOURNAL, Nov. 11, 1911, p. 1634.

25, 26, 27 and 30.—Abstracted in THE JOURNAL, Nov. 18, 1911, pp. 1719 and 1720.

Pennsylvania Medical Journal, Athens

December, XV, No. 3, pp. 169-254

31 Histopathology of Preparalytic Stage of Acute Anterior Poliomyelitis. A. R. Allen, Philadelphia.
32 Recent Studies in Experimental Pathology of Acute Anterior Poliomyelitis. P. A. Lewis, Philadelphia.
33 Surgical Treatment of Poliomyelitis. G. G. Davis, Philadelphia.
34 *Sanitary Control of New York's Milk-Supply. E. J. Lederle, New York.
35 *Milk and Its Relation to Public Health. P. J. Eaton, Pittsburgh.
36 Clean Milk from Producer's Standpoint. H. E. Van Norman.
37 *Year's Work of Commission on End-Results of Fractures of Shaft of Femur. W. L. Estes, Easton.
38 *Lodge Practice. H. M. Alleman, Hanover.
39 Diagnosis and Medical Treatment of Poliomyelitis. W. G. Spiller, Philadelphia.
40 Pennsylvania's Work on Poliomyelitis. S. G. Dixon, Harrisburg.

34, 35 and 38.—Abstracted in THE JOURNAL, Oct. 28, 1911, pp. 1479 and 1480.

37. **Fractures of Femur Shaft.**—The commission recommends that teachers of surgery in medical schools should give far more attention than they have done in the last decade or more to their own investigation of fractures and to the teaching of this most important branch of surgery to the students who belong to their classes. While recognizing the fact that *x*-ray photographs may be most misleading, the commission believes, nevertheless, that when taken by competent anatomists, who understand the importance of proper relative position of tube and limb and the importance of taking more than one view of the fracture, these radiograms will furnish an indication for the proper reduction and the mechanical appliances for the preservation of proper apposition and that they will serve as a graphic record of the fracture itself. These radiographs to be most valuable should be taken before reduction of the fracture, when it has been reduced and has a fixed dressing and finally after union has taken place and the patient is able to be up and about. In regard to the method of treatment the commission from the study of the cases finds that some form of traction is the method most commonly employed and that the result after such treatment, in most cases, enables the patient to resume his occupation and function without serious detriment. Properly taken *x*-ray pictures, however, show that absolute apposition and restoration of proper axis of the bone is very seldom accomplished. Deaths from simple fractures of the femur occur in 8.6 per cent. of the cases. The reports show they occur almost wholly in old age, from shock and exhaustion or from pneumonia; in drinkers from delirium tremens; or from some operative interference. It is evident that the open method itself introduces into the treatment of these cases such a very marked element of danger that the commission cannot recommend the method for general use or recognize it as a routine practice. In selected cases in which it is impracticable to restore the fragments to their proper position and where mechanical means have failed within a reasonable time to produce proper restitution of the fragments, the open method may be employed, but then only by an experienced surgeon, one who habitually employs most thorough aseptic methods. The commission does not recommend any one method of mechanical treatment. As in everything else, the method must be adapted to the case itself and not the case to the method. Some form of traction, such as Buck's extension, seems to be the preferable method of treatment. Plaster of Paris is also a valuable means of treating these fractures, but it should be applied under anesthesia. Complete relaxation, unconsciousness of pain and laxity of muscle are necessary in applying the plaster dressing properly to these cases. The ordinarily employed method of measuring from the anterior superior spine of the ilium to the tip of the internal malleolus should be checked, as a rule, by some other measurement, as for instance measuring from the tip of the ensiform cartilage to the internal malleolus or patella, or from the middle of the umbilicus to the internal malleolus. In making all measurements it is important to ascertain and assure, if possible, that the pelvis is not tilted and that the anterior spines are in the same horizontal plane.

Journal of Missouri State Medical Association, St. Louis

December, VIII, No. 6, pp. 225-266

41 Crisis in Medical Profession. S. P. Child, Kansas City.
42 Use of Diets Rich in Carbohydrates in Treatment of Diabetes Mellitus. W. P. Elmer, St. Louis.
43 Etiology of Retrodisplacement of Uterus. O. Hofmann, Kansas City.
44 Diagnosis of Retrodisplacement of Uterus. G. Gellhorn, St. Louis.
45 Treatment of Retrodisplacement of Uterus. O. B. Campbell, St. Joseph.
46 Diagnosis of Chronic Pancreatitis. C. C. Conover, Kansas City.
47 General Principles of Operative Treatment of Carcinoma. A. E. Hertzler, Kansas City.
48 Non-Surgical Treatment of Cancer. J. Grindon, St. Louis.
49 Differential Study of Multiple Benign Cystic Epitheliomas and Adenoma Sebaceum in Negro. R. L. Sutton, Kansas City.

Journal of Tennessee State Medical Association, Nashville

December, IV, No. 8, pp. 299-342

50 *Spina Bifida. B. B. Cates, Knoxville.
51 Tuberculosis of the Spine. A. G. Nichol, Nashville.
52 How to Succeed in the Practice of Medicine. T. M. Roberts, Sweetwater.
53 Care of Children's Teeth. J. L. Austin, Chattanooga.
54 Diagnosis of Tumors of Bones. R. J. McFall, Cumberland City.
55 Diagnosis of Duodenal Ulcer. J. F. Gallagher, Nashville.
56 Pellagra. P. H. Acuff, Washburn.

50. **Spina Bifida.**—Cates has operated on seven patients with two deaths, a mortality of 26.7. There were five males and two females. The ages varied at the time of operation from twenty-eight days to twenty-six years. The situation of the tumor was midsacral, lumbosacral, lumbar and upper sacral in one case each and cervical in three cases. All the tumors were meningoceles, except one, a meningomyelocele. Two mothers bore three spina bifida children with the tumors in the cervical region. Both mothers had pellagrous symptoms. One, the mother of the child with meningomyelocele, afterward died of pellagra. One mother with pellagrous symptoms gave birth to two children with tumors in the cervical region. One lived three months and died of bronchopneumonia, not, however, before developing hydrocephalus. Two years later this woman bore a male child with a tumor in the cervical region. This child is living and thriving, twenty months after operation, though it shows a slight strabismus. Another mother, who bore a boy with tumor in the lumbar region, had Graves' disease.

Northwest Medicine, Seattle, Wash.

December, III, No. 12, pp. 335-366

57 Surgical Treatment of Exophthalmic Goiter. M. B. Tinker, Ithaca, N. Y.
58 Goiter. E. F. Root, Salt Lake City, Utah.
59 Present Status of Salvarsan in Vienna Clinics. R. C. Matson, Portland, Ore.
60 *Medical Inspection of Schools. G. E. Hyde, Rexburg, Ida.
61 Hemorrhagic Menopause Uterus. T. C. Witherspoon, Butte, Mont.
62 Sarcoma With Special Reference to Its Treatment by Mixed Toxins. C. J. Smith, Pendleton, Ore.
63 Nitrous Oxid Oxygen Anesthesia. S. W. Schaffer, Portland, Ore.
64 Phase of Tonsil Question. R. W. Perry, Seattle, Wash.
65 Diabetes Mellitus in Childhood. W. Gellhorn, Seattle, Wash.

60. Abstracted in THE JOURNAL, Dec. 9, 1911, p. 1943.

Journal of Nervous and Mental Disease, Lancaster, Pa.

December, XXXVIII, No. 12, pp. 765-781

66 Chronic Hypertrophic Spinal Pachymeningitis. C. K. Mills and E. M. Williams, Philadelphia.
67 *Multiple Ependymomata of Brain and Spinal Cord. With Tabetic Symptoms. H. C. Gordinier and H. P. Sawyer, Troy, N. Y.
68 Case of Pseudo- or Diffuse Sclerosis. T. Diller and G. J. Wright, Pittsburgh.

67. **Ependymomata of Brain and Spinal Cord.**—The authors direct attention to a diffuse tumor formation whose anatomic location was such as to excite gradual compression and destruction of the posterior nerve roots, resulting in a symptom complex closely simulating tabes dorsalis. From a pathologic standpoint the case seems to stand alone, as they could find no record in the literature of a precisely similar case. The pathologic findings may be summarized as follows: A diffuse new growth derived from and having its primary location in the ependymal lining of the ventricular spaces of the brain. A wide-spread involvement of the frontal lobes, with marked necrosis of the growth proper and the surrounding brain tissue. Multiple nodules of the crura and pons, impli-

eating the sixth nerve roots of the left side especially. Implication of the posterior nerve roots and dorsal aspect of the spinal cord throughout its whole length. The location of the pathologic changes found in this case explains well the symptoms from which the patient suffered during the last two years of her life. The sudden attacks of recurring pains, the incoordination and ataxia, the Rombergism, the loss of the patella and tendo Achilles jerks, the characteristic gait, loss of muscle sense, the retardation of the conduction of pain sense and the anesthetic areas, were doubtless due to the anatomic limitation of the diffuse ependymal growth to the dorsal aspect of the whole length of the spinal cord, implicating especially the dorsal spinal nerve roots which are absolutely encircled as if en cuirass by the cellular proliferation, causing compression and atrophy of them, together with secondary ascending degeneration of the dorsal columns. Paralysis of the left external rectus muscle was occasioned by degeneration of the left sixth nerve. The mental symptoms, consisting of progressive loss of memory, slow cerebration and general mental enfeeblement (frontal lobe symptoms), were due to the wide-spread areas of necrosis resulting from the ependymal growths which involved the frontal lobes.

Journal of Michigan State Medical Society, Battle Creek

December, X, No. 12, pp. 583-665

69 Intestinal Tuberculosis. S. G. Gant, New York.
70 *Diagnosis of Heart Disease. G. W. McCaskey, Ft. Wayne, Ind.
71 *Heart in Acute Infections. C. G. Jennings, Detroit.
72 Management of Heart Cases in General Practice. J. B. Whinery and T. D. Gordon, Grand Rapids.
73 *Acute Anterior Poliomyelitis. B. F. Green, Hillsdale.
74 Poliomyelitis. T. M. Koon, Grand Rapids.
75 *External Pelvimetry With Special Reference to Method of Measuring Outlet. H. H. Cummings, Ann Arbor.

70, 71, 73 and 75. Abstracted in THE JOURNAL, Oct. 28, 1911, p. 1483.

Journal of Indiana State Medical Association, Fort Wayne

December, IV, No. 12, pp. 505-548

76 Fibromyoma of Uterus. S. J. Young, Valparaiso.
77 *Injuries in and About Ankle. E. H. Griswold, Peru.
78 Why Re-operate in Adenoids? G. W. Spohn, Elkhart.
79 Diagnosis and Treatment of Empyema. H. Elliott, Brazil.
80 *Improved Method of Treating Fractures of Humerus. H. R. Allen, Indianapolis.

77. **Ankle Injuries.**—Griswold emphasizes the great importance of an exact knowledge of the manner of infliction of injury as a means to correct diagnosis and application of proper treatment. Without this knowledge severe injuries which are apparently minor are treated improperly and a favorable prognosis given with later disappointing results, as a permanent lameness from an unrecognized Pott's fracture, or an amputated foot that might have been saved. Therefore, Griswold denominates history of the accident as a symptom of injury and the first and most important symptom in differentiating injury from disease as well as aiding in a correct diagnosis of the character and extent of injury and the adoption of proper surgical procedures.

80. **Treatment of Fractures of Humerus.**—On the basis that in fractures of the humerus the object is to secure a constant distance between broken bone fragments, or a constant length of arm by employing a constant force to one end and a fixed force to the opposite end, Allen has constructed a padded metallic brace, with straps at the wrist and mid-arm, axillary pads, v-shaped, bearing against the antero-posterior muscle boundaries of the axillary space. The prolongation of the crutch arms terminates in round metallic pads, one of which rests over the pectoral muscles and the other over the scapula. On these pads are metallic cleats for the attachment of adhesive plaster. When the forearm is flexed on the arm more acute than a right angle, it forms a re-entrant angle into which is placed the downward traction metallic pad. This pad is the counterpart of the upward axillary traction pad. By tightening the adjustment screw or by lowering the re-entrant angular pad the fragments of broken humerus are pulled to their proper level or even below their proper level. The hand is at all times free to act.

New Mexico Medical Journal, Las Cruces

November, VII, No. 2, pp. 35-66

81 Salient Epidemiologic Features of Pellagra. C. H. Lavinder, U. S. P. H. & M.-H. S.
82 Surgery of Stomach. C. B. Lyman, Denver.
83 Feeding in Typhoid. J. A. Rolls, Santa Fe.
84 Fest's Operation for Cure of Enuresis in Female, With Report of Case. E. B. Shaw, Las Vegas.

Yale Medical Journal, New Haven, Conn.

November, XVIII, No. 3, pp. 99-234

85 *Serums and Vaccines, Prophylactic and Curative. J. H. Egbert and O. O'Neill, Willimantic, Conn.
86 Anaphylaxis and Its Application to Legal Medicine. A. J. Wolf, Hartford, Conn.
87 Salvarsan in Treatment of Syphilis. J. C. Rowley, Hartford, Conn.
88 Value of Repeated Examinations of Urine in Diagnosis of Pyelitis. H. M. Steele, New Haven, Conn.
89 Some Aspects of the Early Months of Pregnancy. J. B. McCook, Hartford, Conn.
90 Bronzed Diabetes (Hemochromatosis). G. Blumer, New Haven, Conn.
91 Some Problems Connected With Medical Inspection in Schools. E. W. Goodenough, Waterbury, Conn.
92 Secondary Parotitis. F. C. Hyde, Greenwich, Conn.

85. **Serums and Vaccines.**—While no very large proportion of cures in cases of developed tetanus through the administration of tetanus antitoxin have been recorded, the authors hold that it should, nevertheless, be employed in all cases, since, by neutralizing the poison circulating in the blood, it may turn the tide in the patient's favor, even though it does not repair the damage already occasioned to the nervous system. Antistreptococcic serum in the hands of the authors has proven especially useful in cases of acute and spreading infection with marked toxemia. Their experience with both streptococcic and staphylococcic vaccines (bacterins) is that stock vaccines of these varieties are very uncertain but that autogenous vaccines are highly efficacious. They report five cases of gonococcic infection treated with gonococcic vaccine; three presented arthritis; one (a case of multiple infection), arthritis and iritis and one iritis. From 5,000,000 to 50,000,000 killed cocci were injected *pro re nata*. Results were good, both as regards the arthritis and the iritis. The benefit to the urethral condition was negligible. Stock vaccines were employed. Six cases of lobar pneumonia were treated by inoculation, with one death. Four received autogenous vaccines. Of the sixteen cases, eight were single pneumonias and one among the doubles. One patient receiving the treatment was pregnant at the time, giving birth to a normal child at term the day crisis occurred. One of the single pneumonias had a preexisting pulmonary tuberculosis. The one fatal case in the series was a double pneumonia that came under treatment on the fifth day of the disease, death occurring from toxemia. The general condition improved and the temperature dropped after the injection of the vaccine in all these cases but two, the fatal case and a boy of 9 years who reacted badly to the vaccine, every injection being followed by rise of temperature, diminished expectoration, lessened diaphoresis and even delirium. In this latter case the inoculations were discontinued and the patient pulled through on stimulants and expectorants. In none of these cases did crises occur before the usual time and in five there was no marked crisis, convalescence following lysis. Delayed resolution was the rule. The inoculations usually lessened expectoration, but in all, except the case just noted, diaphoresis was augmented. The average dose administered was ten minims, equal to about 35,000,000 bacteria, every twelve hours. Average number of injections, ten. The authors believe that the value of the vaccine treatment of pneumonia seems to be well established. Early diagnosis and prompt resort to the vaccine treatment are important. Stock vaccines are promptly obtained and should be employed during the preparation of autogenous products.

Journal of Kansas Medical Society, Kansas City

November, XI, No. 11, pp. 451-490

93 Postoperative Tonsillar Hemorrhage. J. E. Sawtell, Kansas City.
94 Trifacial Reflexes With Special Reference to Diseases of Eye, Ear, Nose and Throat. A. H. Andrews, Chicago.
95 *Management of Nervous Child. M. L. Perry, Parsons.

December, XI, No. 12, pp. 491-534

96 Personal Rights vs. Tuberculosis. S. J. Crumbine, Topeka.
97 Case of Desmoid of Stomach Wall. G. M. Gray and C. C. Nesselrode, Kansas City.
98 Tincture of Iodin as Antiseptic. N. C. Speer, Osawatomie.
99 Necessity for Early Recognition of Gall-Bladder Disease and Its Surgical Treatment. H. L. Snyder, Winfield.
100 Colpectomy. L. F. Barney, Kansas City.

95. Abstracted in THE JOURNAL, Oct. 28, 1911, p. 1481.

V. 58
1912

Northwestern University Bulletin, Chicago

December, XIII, No. 2, pp. 45-88

101 Postoperative Ileus, Immediate and Remote. F. A. Besley, Chicago.
102 Recent Currents in Psychotherapy. J. Grinker, Chicago.
103 *Mitral Stenosis of High Grade. C. A. Elliott, Chicago.
104 Differentiating Urethral Shreds in Anterior and Posterior Urethritis. M. Wolff, Chicago.
105 Significance of Wassermann Reaction in Various Stages of Syphilis. N. D. Curry and M. Wolff, Chicago.
106 Treatment of Diabetes Mellitus. C. E. Johnson, Chicago.
107 Relation of Glycosuria to Pancreas. H. McGuigan and C. L. von Hess, Chicago.

103. **Mitral Stenosis of High Grade.**—Mitral stenosis of high grade is believed by Elliott to be much more frequent than is generally supposed. It is frequently associated with hemorrhage ("phthisic type," "uterine type"). Repeated attacks of mitral disease are almost certain to bring on stricture at the valve. It is as true that mitral regurgitation is always accompanied by more or less stenosis, as is the old saying that mitral stenosis is always accompanied by regurgitation. Many cases are entirely latent and insidious in their course, the compensation being so gradually and completely developed that the patients are entirely unaware of the existence of a valvular lesion until on sudden exertion (i. e., childbirth, running up stairs, a sharp pneumonia) compensation suddenly fails, the immensely hypertrophied right heart will not give, and the patient suffers a sharp, possibly fatal, attack of pulmonary edema. There is frequent association of embolism with mitral stenosis. The emboli for the most part are passively formed in the slowed-down venous streams of the lesser circulation. Mitral stenosis is the most frequent chronic valve lesion associated with embolism. The physical findings during periods of broken compensation are apt to simulate those of myocarditis, notably the extreme dilatation and weak, irregular pulse, thus explaining the frequency with which mitral stenosis goes to autopsy under the mistaken diagnosis of myocarditis. The degree of compensation attained in some cases seems incredible in the face of such extreme stenosis. Three groups seem fairly well differentiated: 1. Lesion latent; compensation apparently perfect; lesion manifest only on physical examination. 2. Lesion stationary; compensation for light work established; periodical compensation at times of increased demands for heart work; periodical fluctuation in the physical findings. 3. Lesion progressive; ultimate complete broken compensation, extreme dilatation and arhythmia.

Journal of Medical Society of New Jersey, Orange

December, VIII, No. 7, pp. 337-390

108 *Foreign Bodies in Eye. W. B. Johnson, Paterson.
109 Mosquito as Sanitary and Engineering Problem. E. A. Ayers, Branchville.
110 Significance of Pain in Diagnosis of Disease of Lower Abdomen. T. B. Lee, Camden.
111 Bacterial Vaccines; Theory and Principle of Their Therapeutic Application. C. Z. Garside, New York.
112 Feeding of Children. D. E. English, Summit.
113 Strictures of Male Urethra and Their Complications. W. Neer, Paterson.
114 Improved Medical Inspection of Public Schools and Its Results. G. J. Holmes, Newark.
115 Secretary's Relationship to Non-Attending Member and to Non-Member. D. Strock, Camden.

108. Abstracted in THE JOURNAL July 12, 1911, p. 317.

Long Island Medical Journal, Brooklyn

November, V, No. 11, pp. 431-472

116 Scientific Spirit Versus Commercialism in Medicine. W. L. Conklin, New York.
117 *Some Considerations Concerning Epilepsy. J. F. Munson, New York.
118 Diagnosis and Treatment of Cholecystitis. H. L. Prince, Ithaca, N. Y.
119 Diseases of Bone and Their Clinical Importance. C. F. Painter, Boston.
120 Cesspool for Dwellings Without Sewer Privileges. A. A. Young, Newark, N. Y.
121 Experiences With Noguchi Test. C. O. Boswell, Rochester, N. Y.
122 Simple Apparatus for Giving Salvarsan. J. Roby, Rochester, N. Y.

117. **Epilepsy.**—Speaking on the subject of what the family physician can do to prevent epilepsy Munson says that the discipline and supervision which he can institute at home will benefit both the patient and the family. Sedative medication can be balanced with the seizures at a happy medium. He can encourage the patient to work. He can assist in the eugenics movement by creating in his community a sentiment in favor of restricting marriage on the grounds of mental and physical fitness and by collecting data. By assisting in the limiting of the spread of infectious diseases and especially of the venereal diseases (and alcohol) through education or otherwise, he can assist in limiting the amount of degeneracy. From the material at hand, he can furnish valuable data and statistics on the position of certain etiologic factors in epilepsy.

Illinois Medical Journal, Springfield

December, XX, No. 6, pp. 607-744

123 *Abuse of Local Treatment in Gynecology. H. T. Byford, Chicago.
124 Puerperium Considered as Period of Prophylaxis Against Subsequent Abdomino-Pelvic Diseases. C. Culbertson, Chicago.
125 Vesicovaginal Fistula: Report of Five Cases. A. Conklin, Chicago.
126 Technic for Supravaginal Hysterectomy. C. U. Collins, Peoria, Ill.
127 Female Perineum. H. L. Green, Quincy, Ill.
128 When is a Case of Tuberculosis Curable? Time Required for Cure and Subsequent Precautions to be Observed. T. B. Sachs, Chicago.
129 Present Status of Our Knowledge of Infectiousness of Milk Containing Tubercle Bacilli. F. G. Heinemann, Chicago.
130 Tuberculosis Dispensary and Home Treatment. H. R. M. Landis, Philadelphia.
131 Value of Tuberculin in Diagnosis and Treatment of Pulmonary Tuberculosis. J. Ritter, Chicago.
132 Legal Aspect of Medicine. A. L. Mann, Elgin, Ill.
133 Physician as Witness. C. F. Irwin, Elgin.
134 *Tonsil Instruments. R. J. Tivnen, Chicago.

123. Abstracted in THE JOURNAL June 7, 1911, p. 1842.

134. Abstracted in THE JOURNAL August 26, 1911, p. 722.

Medical Record, New York

December 30, LXXX, No. 27, pp. 1309-1368

135 Quantitative Analysis of Human and of Cows' Milk. A. V. Meigs and H. L. Marsh, Philadelphia.
136 Trunk Anesthesia. B. Holmes, Chicago.
137 Chronic Invalidism Due to Pathologic Conditions of Colon and Appendix. J. T. Pilcher, Brooklyn.
138 *Transplantation of Cord in Operations for Hernia. A. V. Moschcowitz, New York.
139 Scrubbing Ulcers. E. C. Beck, New York.
140 *Automatic Device for Reading Systolic and Diastolic Blood-Pressures. B. R. Hoobler, New York.
141 Confirmation Studies of Weinstein's Test for Cancer of Stomach. L. K. Hirshberg, Baltimore.
142 *New Typhoid Test. F. A. Prendergast, Brooklyn.

138. **Transplantation of Cord.**—Moschcowitz claims that oblique inguinal hernias are to be operated on without transplantation of the cord, whereas direct inguinal hernias are to be operated on with transplantation of the cord.

140. **Automatic Device for Reading Systolic and Diastolic Blood-Pressure.**—The principle on which Hoobler's apparatus operates is the use of the "double cuff" arrangement in connection with the Fedde pith-ball device. A cuff, such as is ordinarily used on any blood-pressure instrument, is placed about the upper arm of the patient. This cuff is connected with a much smaller one about the lower arm by means of a rubber tube in which is inserted a cut-off valve. Also, from the lower cuff a rubber tube connection leads into another air-tight chamber which consists, for example, of a small rubber bag. Into this rubber tube connecting the lower arm-cuff with this rubber bag is inserted a small glass tube open at either end into whose bore is introduced a small pith ball after the manner devised by Fedde. In order to operate, the cut-off between the upper and lower arm-cuff is opened and air is pumped in as in filling the ordinary upper arm-cuff of any instrument. Instead, however, of filling the upper arm-cuff only, the air is passed into the lower arm-cuff as well as into the extra bag leading from it. The air is passed in continuously until the pressure in all the bags is about 100 mm. mercury, as shown by the blood-pressure instrument. At this point the cut-off between the upper arm-cuff and the lower arm-cuff is closed, making now two distinct air-tight chambers, the one in the upper cuff and the other made up of the rubber bag in the lower arm-cuff and the bag connected with it. The two last mentioned bags are connected by the pith-ball tube.

As pulsations pass into the forearm there is at each pulsation slight enlargement of the volume of the forearm. Each enlargement will cause the air to pass from the bag in the

cuff about the lower arm, through the tube containing the pith ball, into the rubber bag connected with it. This will force the pith ball to move in the direction of the air current, hence with each arterial pulsation air will rush from the lower arm-bag, causing the pith ball to jump. On the other hand, after each pulsation the arm will return to its smaller size, thus in obedience to the law of equalization of pressure, the air is made to flow back into the lower arm-bag, thus drawing the pith ball back toward the arm. Hence there are oscillations of the pith ball as long as there are arterial pulsations in the forearm. Now, if additional air is pumped into the upper arm-cuff, which is shut off from the lower arm-bag, by the cut-off valve, to the point of obliterating the forearm pulsations, there will likewise be a cessation of the oscillations of the pith ball. At this point the height of the mercury column is read for the systolic pressure. Or, the air may be pumped into the upper cuff far above the true blood-pressure and allowed to escape through a needle valve. By this method, as soon as the pulsations appear in the forearm, they are recorded by the instant oscillations of the pith ball, this being the systolic reading. These results are identical whether taken at the cessation of the pith-ball oscillations or at the first appearance of such oscillations.

If the operator opens the shut-off between the upper and lower arm-bags and watches the oscillations of the pith ball as the air is permitted to escape through a needle valve, the point at which the oscillations are greatest is the place at which the diastolic pressure is read.

142. **New Typhoid Test.**—Prendergast's test consists in injecting with a fine hypodermic needle a few drops of a suspension of dead typhoid bacilli of the strength of less than 5,000,000 per c.c. After the solution has been injected intradermally (care always being taken to raise as superficial a bleb as possible and with a well-mixed solution) in twenty-four hours the non-typhoid patient shows a well-marked area of redness around the point of injection. The typhoid patient shows absolutely no reaction. The reaction (as a rule) begins to appear in twelve hours, reaches its maximum in twenty-four hours, and has disappeared in 48 hours. Any redness after forty-eight hours is considered an infection and is not taken as a reaction. This test gives no constitutional reaction (rise of temperature, malaise, chill, etc.), and has no elements of danger. In the negative cases (controls) a few patients have complained of slight soreness and itching at point of injection twelve to twenty-four hours after the injection was given. This quickly subsided without treatment and gave no after-trouble.

Ohio State Medical Journal, Columbus

December, VII, No. 12, pp. 561-620

143 Surgical Aspect of Urogenital Infections With Special Reference to Kidney Tuberculosis. C. E. Barnett, Ft. Wayne, Ind.
144 Relation of Pyogenic Microorganisms to Etiology and Treatment of Skin Diseases. H. R. Varney, Detroit.
145 Ten Months' Experience with Wassermann Reaction as Clinical Sign of Syphilis. C. L. Cummer and R. Dexter, Cleveland.
146 Shall We Remove Tonsils for Relief or Cure of Rheumatism? C. S. Means, Columbus.

Journal of Ophthalmology and Oto-Laryngology, Chicago

December, V, No. 12, pp. 375-404

147 Tuberculosis of Uveal Tract. With Presentation of Case. E. W. Alexander, San Francisco.
148 Indications for Mastoid Operation. F. E. Francbere, Sioux City, Ia.

New York Medical Journal

December 30, XCIV, No. 27, pp. 1313-1352

149 *Localized Outbreak of Typhoid Traced to Milk Infected by a Bacillus Carrier; Also Case of Laboratory Typhoid Contracted from Cultures. C. F. Bolduan and W. C. Noble, New York.
150 Venereal Diseases and Their Relation to Infant Mortality and Race Deterioration. P. A. Morrow, New York.
151 Sterility in Women. E. McDonald, New York.
152 Diffuse Suppurative Labyrinthitis; Its Diagnosis and Relation to Endocranial Complications. J. Auerbach, New York.
153 Talk About Climates of South-West. E. E. Elliott, Chicago.
154 Indications for Radical Operation in Frontal Sinusitis. S. McCullagh, New York.
155 Social and Moral Considerations Related to Medical and Surgical Care of Crippled Children. D. C. McMurtrie, New York.
156 *The "Drop-Stroke" Method of Percussion. O. Lerch, New Orleans.

149. **Localised Typhoid.**—A dairy farmer gave a history of six cases of typhoid on his farm in 1904, one in 1907 and one case in 1908. The dairyman represented the last of the six cases in 1904, and was now the only person on the farm who had had the disease. Specimens of his stools were collected and examined for typhoid bacilli. The examinations disclosed the presence of enormous numbers of living typhoid bacilli. The bacilli were tested with typhoid agglutinating serum and also as to their cultural characteristics. They proved to be typical. As a confirmation of the laboratory findings in this case, it is of interest to note that one of the laboratory assistants, while pipetting a broth fishing from one of these specimens, accidentally drew some into her mouth. Two weeks later she developed typhoid, which ran a typical course ending in recovery. A blood-culture taken during the course of the disease yielded typical typhoid bacilli.

156. **Drop-Stroke Method of Percussion.**—The characteristic feature of Lerch's new method of percussion is the drop. As soon as the dropping hammer touches the pleximeter, vibrations are felt in the palm of the hand and the finger tips, changing in character with the slightest change in the area percussed. A 1-inch drop or a drop of several inches is the same in everybody's hands, and it does not matter whether the lean man or the fat man, the nervous or the calm practices it, he will not differ in results as long as he allows the hammer to drop on the pleximeter. As soon as the border of a solid organ is reached, the hammer feels heavy when the organ is located near the surface, light when the organ is deeply located and air intervenes between it and the body surface. This sensation varies according to the amount of air beneath. At the same time, the rebound of the hammer varies proportionately in height and frequency; there is practically no rebound when a solid organ is in contact with the surface. Finally, perceptibly later, the changing note is heard, a dull thud, directly over the solid organ. These three criteria: the vibrations felt, the rebound of the hammer seen, and the note heard, Lerch says, allow even those who do not possess an acute sense of hearing, to obtain the same results as those who have; as the eye and sense of touch, active all at the same time, make up for any deficiency of hearing.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

December, XIII, No. 6, pp. 327-392

157 Tumor of Ponto-Cerebellar Angle with Bilateral Loss of Smell and Disturbance of Tastee. B. R. Tucker, Richmond.
158 Case of Raynaud's Disease. J. E. Stokes, Salisbury, N. C.
159 Seven Hundred Cases of Nitrous Oxid-Oxygen Anesthesia. S. Leigh and J. H. Culpepper, Norfolk, Va.
160 Early Diagnosis of Tuberculosis. J. J. Loyd, Catawba, Va.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

December, IV, No. 6, pp. 87-103

161 Disposal of Sewage in Small Towns and Country Dwellings. W. R. Stokes, Baltimore.
162 Good to Be Derived From Our Sanitary Sewerage System. C. H. Jones, Baltimore.
163 Baltimore Sewerage System. C. W. Hendrick, Baltimore.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

December 16, No. 2659, pp. 1577-1636

1 Bier's Hyperemic Treatment. H. F. Waterhouse.
2 Leprosy. T. S. B. Williams.
3 *Remarkable Daily Variation in Leukocytes in Several Diseases. D. Thomson.
4 *Dangers of Saline Injections. E. C. Hort and W. J. Penfold.
5 Six Cases of Arsenic Poisoning Caused by Fumes from Coke Stove. J. G. Taylor and K. V. Trubshaw.
6 *Paroxysmal Attacks of Dyspnea, Occurring at Night, in Heart Disease H. Barber.

3. **Daily Variations in Leukocytes in Diseases.**—The main point emphasized by Thomson is that leukocyte counts should always be made every four to eight hours because of the extreme variability of forms and numbers in all diseases. He also suggests a protozoon origin of Hodgkin's disease, the suggestion being based on the similarity of the leukocyte picture to that seen in malaria.

4. Dangers of Saline Injections.—The authors believe that saline injections as at present administered are by no means free from risk, especially when they are large. Neither centrifuging, filtration through cotton-wool or bacterial filters, nor boiling, is sufficient to prevent the fever that follows saline injections. It is claimed that distillation in a sterile Jena retort of all water used in the preparation of saline solutions, followed by immediate injection, is at present the only reliable method of insuring that no fever follows the injections.

6. Paroxysmal Attacks of Dyspnea in Heart Disease.—The features, common to all Barrer's patients, are that they occurred in elderly men in whom the heart was enlarged. In no case was there valvular disease which appeared to be primary, nor signs of an aneurysm. In two the high blood-pressure suggested chronic interstitial nephritis as a primary disposing cause to the heart trouble, but in the absence of albuminuria or other signs of kidney disease the attacks would not appear to be uremic. Barrer is inclined to believe that the morbid anatomy of the condition in all has been degeneration of the heart muscle.

Lancet, London

December 16, CLXXXI, No. 4607, pp. 1677-1754

7 *Intra-Abdominal-Pelvic Pressure in Man. R. H. Paramore.
8 Abdominal and Pelvic Surgery. R. Morison.
9 Venereal Disease: Its Present and Future. D. White and C. H. Melville.
10 *Case of Rapid Involution of Uterine Fibromyoma After Parturition. R. L. E. Downer.
11 *Calcium Salts as Prophylactic Against Serum Rashes. M. A. Cassidy.
12 *Diplococcus from Urino-Genital Tract. L. S. Dudgeon and P. N. Panton.
13 Splenomegalic Polycythemia with Cyanosis. E. Clark-Jones.
14 Ovarian Cystoma of Unusual Size Complicated with Ventral Hernia and Ascites. H. Macnaughton-Jones.

7. Intra-Abdomino-Pelvic Pressure.—The intra-abdomino-pelvic pressure, even that maintained during posture and rest, Paramore says subserves most important circulatory functions. It not only quickens the whole circulation, but renders the blood richer and purer in a shorter time; and this is the reason of its far-reaching effects on general metabolism. By maintaining a high aortic pressure it lays the foundation for an efficient cerebral circulation so important to man; it is, indeed, by its means that man has been able to evolve and is able to maintain a vigorous and strenuous life, both physical and mental, in spite of his erect carriage and the elevated position of his brain.

10. Involution of Uterine Fibromyoma.—Downer concludes in his case that a fibroid of the size of a cricket ball entirely disappeared in the course of two months during the process of involution. A year later the patient again became pregnant and at the present time, gestation having proceeded for five months, there is no sign of any reappearance of the tumor.

11. Calcium Salts for Serum Rashes.—In the diphtheria ward at St. Thomas' Hospital it has been the custom during the last few years to administer calcium salts with the object of influencing the severity of antitoxin rashes. In order to ascertain the effect, if any, of this treatment, Cassidy took sixty-two consecutive cases and administered calcium to alternate patients, irrespective of the extent of membrane or dose of serum. The chlorid was the salt used in most cases, but the lactate was given occasionally; the average dose was 5 gr. (maximum, 10 gr., minimum, 3 gr.), given three times a day, omitting every third day. In each case rashes were carefully looker for, and, when present, noted as being "faint," "moderate," or "severe." Of these sixty-two patients, twelve died in less than twelve days after admission and are therefore excluded. In twenty-three patients treated with calcium there was no rash in four, faint rash in six, moderate rash in five, severe rash in eight. Average duration of rash when present, 8.4 days. In twenty-seven patients treated without calcium there was no rash in sixteen, faint rash in seven, moderate rash in one, severe rash in three. Average duration of rash when present, three days.

12. Diplococcus from Urino-Genital Tract.—The organism described by Dudgeon and Panton is one which is not infrequently met with in the urino-genital tract, yet appears to have escaped notice in the standard works on bacteriology. It is a diplococcus in no way allied to the pneumococcus, yet the two organisms may be, and have been, confused. The authors isolated the organism from the urine of women, children, and much less commonly male adults, as well as from the vagina, and have obtained pure cultures of it from pus from the interior of the uterus. It appears to be particularly common in the urine of small children; in an examination of carefully taken catheter specimens from eleven children with epidemic diarrhea they met with it in eight cases. In its staining properties, its morphologic appearances, and in the nature of its colonies on agar this organism closely resembles the pneumococcus, yet in every other respect the two bacteria are widely different. It should hardly be necessary to insist that the diagnosis of a pneumococcal infection can only be made after full cultural and other investigations, yet the authors venture to think that the frequency with which the pneumococcus has been reported from the urine and from vaginal discharges depends on the mistaken identity of that organism with the one described; in fact, they have evidence that this mistake does occur. The organism is one not infrequently met with, and may be unaccompanied by any evidence of disease. In a certain proportion of cases, however, it is associated with the ordinary phenomena of inflammation and may be the sole organism detected. The coccus appears to have little or no pathogenic action on mice or rabbits.

Journal of Tropical Medicine and Hygiene, London

December 1, XIV, No. 23, pp. 356-364

15 Etiology of Beriberi. H. Fraser and A. T. Stanton.

Practitioner, London

December, LXXXVII, No. 6, pp. 741-886

16 General Practitioner and Medical Society. J. M. Bruce.
17 *Nature and Treatment of Certain Forms of Indigestion. F. J. Wethered.
18 Pulmonary Tuberculosis. M. Paterson.
19 Fatalities of Appendicitis and Their Prevention. W. S. Handley.
20 Recurrent Jaundice, Pyrexia, Splenomegaly, Anemia and Pigmentation of Skin in Girl Aged 11 Years. L. Guthrie.
21 Skin-Grafting. W. Evans.
22 Treatment of Venereal Diseases as We See Them To-Day. J. E. R. McDonagh.
23 Anaphylaxis in Relation to Certain Clinical Manifestations. H. B. Shaw.
24 Practical Points on Blood-Pressure for Practitioner. J. C. McClure.
25 Dr. John Fothergill. R. H. Fox.
26 Case of Traumatic Myositis Ossificans with Involvement of Musculo-Spiral Nerve. E. C. Bevers.
27 Permeating Mastoid Meningitis. J. Burgess.
28 Special Applications of Spa Treatment to Female Pelvic Disorders. M. B. Ray.
29 Medicinal Use of Omnopon. J. Rae.

17. Indigestion.—In Wethered's opinion the pain and discomfort experienced in dyspepsia are due to three causes: (1) the distention of the stomach brought about by the accumulation of gases evolved by faulty digestive processes (if the distention is only slight a sense of fulness and discomfort is felt; if the distention is greater there is actual pain); (2) the existence of free hydrochloric acid, which causes an increase of peristaltic action of the stomach (the acid may also produce a spasm of the pylorus, which causes the pyloric orifice to be closed and so by preventing the exit of gases intensifies the symptoms); and (3) the presence of alcohols evolved in the stomach. The time-honored plan of giving alkalies in certain cases affords relief by neutralizing the acid and so lessening the increased peristaltic action. It is obvious, however, that a more effective plan to relieve the symptoms would be to empty the stomach of the contained gases and the retained more or less altered food matters. This is best done, Wethered says, by emptying the stomach into the duodenum by Mitchell's method. When the surface of the skin immediately beneath the left costal arch is gently stimulated with the fingers contraction of the stomach occurs. The stimulation must be brought about by stroking the skin very lightly; if too much pressure is used a spasm of the pylorus seems to be produced, and gas and fluid are then unable to pass through the pyloric opening. When contraction of the stomach occurs, as evidenced by the sounds heard by the phonendoscope, the stroking must at once be stopped until the bubbling or gurgling sounds have also ceased, otherwise the

V. 191

nervous impulse seems to become too strong and the contraction ceases. When the sounds have stopped the stimulation is again resorted to and so on until the stomach has been emptied, as shown by the results of auscultatory percussion. The procedure is best carried out four hours after a meal. In most cases, once a day for about a week or ten days is required and the interval may be lengthened, every two days, every third day, and so on, until all symptoms have disappeared. At the same time the diet must be carefully regulated. The most important point is suitable spacing of the meals. Three meals a day must be prescribed; breakfast at about 8:30 to 9 a. m.; lunch from 1 to 1:30 p. m.; and dinner at 7 to 8 p. m., nothing whatsoever being taken in the intervals. In this way the stomach has complete rest between the meals and thus has a proper chance of emptying itself, being assisted once a day by the method described.

Glasgow Medical Journal

December, LXXVI, No. 6, pp. 401-475

30 Proptosis. A. M. Ramsay.
31 Development of Acidity in Cows' Milk and Its Relation to Time and Temperature. R. Vincent.
32 *Unusual Distribution of Secondary Growths in Case of Cancer of Female Mamma. G. T. Beatson.

32. Cancer of Female Mamma.—In Beatson's case secondary deposits appeared at (1) umbilicus, (2) vulva, (3) anus, (4) Scarpa's triangle, (5) lower jaw and (6) scalp. The case was inoperable. Not only were nodules present on the right side of the chest anteriorly, on both sides of the neck, on the right lower jaw, on the scalp, and, posteriorly, on the back in the scapular, lumbar and gluteal regions, but they were very numerous on the front wall of the abdomen and had reached to the apex of Scarpa's triangle on the right side, to the mons veneris and to the perineum, a very large one being situated close to the anus. The nodules varied in size from a small bean to a 5-shilling piece, the largest being at the (1) umbilicus, (2) the mons veneris, (3) the left side of the anus and (4) Scarpa's triangle. Of these, three had ulcerated, but not the one near the apex of Scarpa's triangle. Beatson reviews the anatomy of the lymph supply of these regions to show how metastasis could occur.

Annales de l'Institut Pasteur, Paris

November, XXV, No. 11, pp. 785-864

33 *Tuberculosis in the Astrakhan Country. (Recherches sur l'épidémiologie de la tuberculose dans les steppes des Kalmouks.) E. Metchnikoff, E. Burnet and L. Tarassevitch.
34 *Experimental Research on Acute Poliomyelitis. II. (Maladie de Heine-Medin.) K. Landsteiner, C. Levaditi and M. Pastia.
35 Protozoan Infections and Lesions of the Adrenals. (Maladies à protozoaires et lésions des capsules surrénales.) M. Elmassian.
36 *Extensive Epizootic of Rabies. (Sur une grande épizootie de rage.) A. Carini.
37 Mechanism of Alcoholic Fermentation. A. Lebedeff.
38 Distribution of the Proteus Bacillus in Nature. C. Cantu.

33. Comparative Freedom of the Calmucks from Tuberculosis.—The skin test with tuberculin (Pirquet) was extensively applied last summer to the inhabitants of the vast plains in the Astrakhan district along the northwest border of the Caspian Sea. Near the borders 89.5 per cent. of the male adults reacted positively while in the interior the proportion was only 64 per cent. and the difference was greater among the women and still more so among the children. When the older children are sent to a town school they almost invariably contract tuberculosis, so that the authorities are now planning a school for them in the interior. The conditions among the Calmucks offer an exceptionally favorable field for study of the contracting of tuberculosis unusually late in life.

34. Experimental Research on Acute Poliomyelitis.—Among the special points studied was the resistance of the virus; it was learned that the virus kept in glycerin in the refrigerator for 202 days was still capable of infecting monkeys. Even when the virus had been thoroughly desiccated, it proved virulent after twenty-four days, and kept in water or milk at room temperature and exposed to the light it was still virulent after thirty days. Monkeys were inoculated with scraps from the tonsils and pharynx of a child who had succumbed to acute poliomyelitis and the animals promptly contracted the disease while inoculation of scraps of gland tissue from the neck, spleen and mesentery proved harmless. This child had been brought to the hospital, April 7, for tuberculous pleurisy and developed the poliomyelitis May 7, dying May 10. There had been no case of poliomyelitis before in the hospital for fourteen months. But another child who had been in the same ward as the above from April 11 to April 30 developed poliomyelitis four months later.

36. Epizootic of Rabies.—Carini writes from Sao Paulo in Brazil to report an epizootic of rabies in cattle and horses causing the death of about 4,000 cattle and 1,000 horses. There was no unusual prevalence of rabies in dogs at the time, but it was noticed that bats in broad daylight attacked and bit the cattle, and Carini suggests that bats may have been the source of the extensive epizootic. It has been prevailing for several years but exclusively in a narrow strip of the country. As its true nature was not discovered until recently, prophylaxis has not been on the correct basis. The animals affected all die after a few days, and the meat and hides have been utilized but no mishaps have been known to follow.

Archives des Maladies de l'App. Digestif, Paris

November, V, No. 11, pp. 589-648

39 Experimental Variation of Intestinal Putrefaction by Changes of Diet. (Régime et putréfaction intestinale.) A. Bickel.
40 Roentgenoscopy in Locating the Position of the Stomach. (Etudes roentgenographiques sur la situation de l'estomac.) S. Talma.
41 *Influence of Sodium Salts on Elimination of Sodium Chlorid in the Urine and on Abnormal Gastric Secretion. (Influence de l'ingestion du bicarbonate et du citrate de soude sur l'élimination du chlorure de sodium par l'urine et sur la sécrétion chlorhydrique au cours des gastropathies.) A. Mathieu.
42 *Symptoms on Part of Esophagus with Gastric Cancer. (Les symptomes oesophagiens et pseudo-oesophagiens dans le cancer de l'estomac à forme linitique.) A. Cade.

41. Influence of Sodium Salts on Bladder and Stomach Secretion.—Mathieu reports extensive research on the variations in the output of sodium chlorid in the urine and in the secretion in the stomach under the influence of ingestion of sodium bicarbonate or citrate. He tabulates the details in three typical cases of hyperchlorhydria in which the symptoms compelled relief by administration of an alkali. The bicarbonate and citrate displayed a similar action; with both the proportion of sodium chlorid in the urine rapidly dropped when the dose surpassed 20 gm. of the sodium salt and it increased on doses of 10 gm. In some other cases even 6 or 10 gm. of the bicarbonate induced retention. When this reduction in the elimination of sodium chlorid was going on, the gastric secretion seemed to be checked also. Mathieu thinks that this complex mechanism set in play by ingestion of an alkali might be instructively studied with graduated doses to learn the exact moment when saturation of the acid is followed by inhibition of gastric secretion. There was no tendency to edema in his cases, notwithstanding the retention of the chlorid. It may have been eliminated by the bowels.

42. Esophagus Symptoms with Gastric Cancer.—Cade discusses the history and clinical aspect of the symptoms suggesting mischief in the esophagus which accompany diffuse cancer of the stomach. The retraction and loss of elasticity in the walls and the gaping cardia induce early and incessant vomiting and pain in swallowing while the esophagus retains its permeability more or less. In seven cases reported in detail these symptoms apparently located the malignant disease in the esophagus. When the esophagus is also involved, the pain in swallowing is more intense. Insufflation of the stomach, showing the retraction of the walls, is an important aid in differentiation, as also a history of preceding gastric dyspepsia or signs of stenosis of the pylorus. Roentgenoscopy generally clears up the diagnosis at once and should never be omitted.

Bulletin de l'Académie de Médecine, Paris

December 5, LXXV, No. 49, pp. 261-284

43 *Vaccination Against Typhoid in the French Colonies. (Résultats de la vaccination antityphoïdique au Maroc par le vaccin de Wright et les vaccins polyvalents.) H. Vincent.
44 Appendicitis Plus Salpingitis. (Note sur un cas d'appendiculo-salpingite.) P. Segond.

43. **Vaccination of Troops Against Typhoid.**—Vincent reports the results of vaccination of 283 soldiers against typhoid which was prevailing at the time in the garrisons where they were stationed, along the border between Algeria and Morocco. These figures do not include any men who had previously had typhoid or any febrile stomach trouble. Among the 2,632 not vaccinated there were 171 cases of typhoid and 134 cases of febrile stomach trouble, with a typhoid mortality of 0.835 per cent. Among the 129 soldiers vaccinated with Wright-Leishman vaccine one contracted typhoid but had it very lightly, while none of the 154 vaccinated with polyvalent vaccine showed at any time symptoms of typhoid or of a suspicious febrile gastric trouble. The men lived under similar conditions in every respect otherwise than the vaccination.

Lyon Médical, Lyons

November 19, CXVII, No. 47, pp. 1069-1132

45 The Butter in Human Milk. (Etude du beurre dans le lait de femme par la centrifugation.) E. Pluchu and R. Rendu.

November 26, No. 48, pp. 1133-1196

46 Pathologic Anatomy of the Nervous System. (L'anatomie pathologique du système nerveux; son rôle et ses limites dans l'étude des maladies nerveuses.) L. Bériel. Continued.

December 3, No. 49, pp. 1197-1268

47 Lactic Acid Possibly Responsible for White Bile with Certain Cancers. (Réaction de la teinture d'iode avec la gaze blanche, l'alcool et l'eau. Application à la bile blanche dans certains des voies billaires.) M. Jaboulay.

48 Tuberculin Treatment in Tuberculosis of the Eyes. (Tuberculinothérapie de la tuberculose oculaire.) L. Dor.

Presse Médicale, Paris

December 2, XIX, No. 96, pp. 989-1004

49 *Treatment of Leprosy. (Les nouvelles médications antilépreuses.) M. Jeanselme.

50 Superheated Air Douche in Therapeutics. (La douche d'air chaud en thérapeutique; instrumentation; indications; technique.) M. Vignat.

December 6, No. 97, pp. 1005-1012

51 Sodium Silicate Seems to Ward Off Experimental Epinephrin Vascular Lesions. (Athérome expérimental et silicate de soude.) A. Gouget.

52 *Autoserotherapy in Infectious Diseases. P. Modinos.

49. **Treatment of Leprosy.**—Jeanselme reviews the various drugs and physical methods of treatment that have been advocated of late for treatment of leprosy, remarking that he has been much pleased with the benefit derived and the lack of by-effects when chaulmoogra oil was injected mixed with equal parts of a compound oil made by mixing 0.5 gm. of guaiacol with 0.25 gm. of camphor and 5 gm. each of vaselin and oil of vaselin. An injection of 6 c.c. is equivalent to 140 drops of the chaulmoogra oil, and this injection can be repeated three times a week. External cauterizations and other physical measures may heal superficial lesions but they are liable to mobilize the germs and thus do harm. Radium proved efficient in arresting the pain in two cases, and it also induced in a week the retrogression of leprous nodules on the face and ears, the infiltrations subsiding without leaving a trace (De Beurmann and Degrais). The Roentgen rays sometimes have a curative action on recent leprous infiltrations, and Jeanselme cites reports of various writers on this method of treatment, adding that he found it successful in two cases but without any effect in another. The Roentgen rays have an inconstant action on the disturbances of sensation in leprosy, sometiems modifying and sometimes without effect on them. The rays should be applied along the route of the nerve, especially at the points where the nerve seems thickened and knobby. High frequency currents may likewise have a sedative action on incipient nervous disturbances and often prove useful in combating progressive atrophy of muscles, if care is taken not to fatigue the muscle. He adds that the high frequency spark seemed to be instrumental in the cure of a leprous perforating lesion in the foot; a three-minute sitting was given once a week for six weeks with a spark 4 or 5 cm. long. A similar lesion on the other foot of the same patient did not benefit so much, and it recurred. From the multiplicity of methods of treatment it is easy to deduce that none is satisfactory, although almost any one may aid in isolated cases.

52. **Autoserotherapy.**—Modinos applies a blister and injects serum from the blister into the subcutaneous cellular tissue. He draws up into the syringe from 8 to 10 c.c. of the blister fluid and injects it subcutaneously at some other point, and has applied this method of autoserotherapy in sixteen cases including four of influenza, four of typhoid and eight of Malta fever. He is confident that the course of the typhoid in two of the patients was materially attenuated by the procedure and in six of the eight cases of Malta fever. The injection may have to be repeated once or twice after intervals of five days, but when done early it seems to abort the disease. The cooperation of the organism before it has become exhausted by the struggle against the disease is an important factor in the cure. The course of the infection was usually much shortened even when typhoid was complicated with Malta fever.

Revue de Chirurgie, Paris

December, XXXI, No. 12, pp. 839-1070

53 *Echinococcus Disease of the Pleura. (De la pachy-pleurite échinococcique et du traitement des kystes hydatiques de la plèvre.) E. and M. Vincent.

54 *Fifty-Three Cases of Injury of Lungs from Without. (Sur le traitement des plaies du poumon. Etude statistique.) L. Clément.

55 *Injury of Adrenals from Momburg Belt Constriction. (Le procédé d'hémostase de Momburg et les capsules surrénales.) C. Cunestro.

56 *Injury of Vessels in Axilla Complicating Trauma of the Shoulder. (Des lésions des vaisseaux de l'aisselle qui compliquent les luxations de l'épaule.) M. Guibé. Commenced in No. 10.

57 *Treatment of Aneurysms and Hematomas. (Le traitement conservateur des anévrismes et des hématomes.) C. Monod and J. Vanverts. Commenced in No. 11.

53. **Echinococcus Disease of the Pleura.**—Vincent reviews the various forms that may be assumed by this affection, comparing eight cases from the literature with two from his own practice and emphasizing anew that treatment must be exclusively surgical. It should aim to remove all traces of the parasites from the pleura and to release the lung when it is bound down by rigid thickening of the pleura. For the first it is enough to resect the ribs to permit ample access for the pneumotomy. The second indication is met at a second sitting with a flap incision to permit decortication of the lung. His patients were cured by treatment on these principles. In one case the first symptom had been recurring cough for more than three years with fetid sputum during the last six months; then the patient one day coughed up a scrap of membrane-like tissue and fever set in with pain in the right shoulder. Sudden suffocation and intense pain brought him to the hospital where relief was obtained by puncturing the pleura. Hemoptysis a few months later led to the diagnosis of a hydatid cyst in the lung or pleura. Pain in the right side of the chest and general debility were the main symptoms in the second case, with slight fever at times. After five or six months there followed dyspnea on exertion and a single hemoptysis; pleurisy was assumed at first but puncture revealed the echinococcus in the pleural effusion. In another case the only symptom for months was the gradual enlargement of the abdomen, and a laparotomy finally revealed a bile-tinted effusion almost filling the peritoneum and finally traced to a ruptured echinococcus cyst in the liver. The peritoneum does not become inflamed under the influence of such an effusion, even mixed with bile, while the pleura usually develops a pachypleuritis.

54. **Wounds of the Lung.**—Clément comments on the comparative harmlessness of firearm or stab wounds of the lung or injury from fracture of the ribs or crushing accidents. Only when the vessels are involved in the injury is the outlook unfavorable. He tabulates the details of his fifty-three cases.

55. **Momburg Belt Constriction and the Adrenals.**—Cunestro concludes from his experimental research that the Momburg belt method of hemostasis is liable to induce modifications in the structure and functioning of the adrenals. At the same time these are never sufficiently serious to explain alone the instances of immediate sudden death. In a few rare cases, however, if the adrenals were not entirely sound beforehand, it is possible that the procedure might have induced a sudden arrest of adrenal functioning which proved rapidly fatal. Although this injury of the adrenals is not enough to cause death, as a rule, yet it may cooperate in the clinical syndrome and throw light on certain puzzling symp-

toms. The sympathetic nervous system may feel the lack of adrenal functioning, and thus may result an instability and irregular action of the cardiovascular system; this may irreparably injure an already weakened heart.

56. **Lesions in the Vessels in the Axilla with Dislocation of the Shoulder.**—Guibé summarizes seventy-eight cases and discusses treatment. Ligation of the subclavian artery is apparently the preferable technic as it is much simpler than incision of the hematoma, he says; the mortality in the cases on record was only 20 per cent. with ligation while it was 31 per cent. with incision, and gangrene followed in only 20 per cent. of the ligation cases while it occurred in 44 per cent. of the incision cases. The functional outcome with the ligature was excellent results in 25 per cent.; mediocre results in 50 per cent., and the outcome unknown in all the other cases, while with incision excellent results were obtained only in 9 per cent.; mediocre in 36.4 per cent.; outcome unknown in 18.2 per cent., and in 36.4 per cent. the arm had to be finally removed.

57. **Treatment of Aneurysms and Hematomas.**—Monod and Vanverts base their monograph on 107 cases of aneurysm, classifying them according to the artery involved. The list includes a large number from American literature. They report that conservative measures proved successful in 82.5 per cent. of the cases in which they were applied while gangrene followed in only 1 per cent. There was recurrence or postoperative hemorrhage in 11 per cent., generally ascribable to defective technic in suturing the vessel. Traumatic lesions of arteries naturally offer better chances for conservative treatment than lesions of pathologic origin.

V. 58
1912

Semaine Médicale, Paris

December 13, XXXI, No. 50, pp. 589-600

58 *Primary Tuberculous Tumors and Cold Abscess in the Abdominal Wall. (Tuberculomes et abcès froids primitifs de la paroi abdominale.) M. Savariaud.
59 Cholera at the International Sanitary Conference. (Rapport de la sous-commission du choléra.) Van Ermengem.

58. **Primary Cold Abscess in Abdominal Wall.**—Savariaud remarks that the first step in diagnosis is to know of the existence of the affection in question; none of the text-books, however, mentions the possibility of a primary localization of tuberculosis in the abdominal wall. He has encountered six cases of the kind in the last two years, three in children. In one case the tumefaction in the gall-bladder region had been ascribed to a hydrocholecystitis while an attack of pain in the same region six months before had been assumed to be due to appendicitis. No one doubted that the present attack was one of inflammation in the gall-bladder although recognizing the fact that cholecystitis is extremely rare in children. Not knowing that a primary tuberculous cold abscess could develop in the abdominal muscles, simulating a deep lesion, he made no attempt to examine the abdominal wall for such a tumefaction, but prepared to operate at once on the gall-bladder. Fortunately, he did not make a large incision but struck at once the pus pocket at the back of the aponeurosis of the rectus. He thought at first it was a diverticulum from the gall-bladder but the fungous tissue suggested a tuberculous abscess in the sheath of the rectus which had been partially destroyed at this point. The pocket was cauterized with zinc chlorid, loose scraps excised, and the cure was soon complete and permanent, the little girl having shown no other trace of tuberculosis since. Archambault and Hiller have called attention to these primary tuberculous lesions in the abdominal wall. A cold abscess may develop likewise secondary to invasion of the iliac lymph-nodes. The first symptom is pain, but this ceases after the tumor has attained a certain size; it is not movable in the wall. In one of Melchior's cases there was a coincident gall-bladder affection. In Hiller's case there had been pain in the gall-bladder region for over three years, preventing the patient's lying on that side, and the course of the case suggested coincident tuberculous peritonitis. Puncture, aspiration of the contents of the cold abscess and injection of a modifying fluid have given good results in some cases, but the accessibility and perfect results to date of radical surgical treatment render this preferable as a rule.

Berliner klinische Wochenschrift

December 11, XLVII, No. 50, pp. 2237-2284

60 Postoperative Hernia into Abdominal Wall. (Hernia properitonealis abdominalis in alter Bauchnarbe. Brucheinklemmung, Darmgangrän und -resektion.) C. Pochhammer.
61 Torn-Off Upper Eyelid Successfully Replaced. (Operative Heilung eines abgerissenen Augenlides.) C. Hamburger.
62 Advantages of the Alexander-Adams Operation. (Ist heutzutage die Alexander-Adams'sche Operation noch berechtigt?) G. Schickele.
63 *Action of Iodin. (Wirkungen des Jods auf den menschlichen und tierischen Organismus.) Strubell.
64 Case of Recovery from Hodgkin's Disease. (Geheilte Splenomegalie.) M. Mosse.
65 Isolated Tuberculous Process in the Wall of the Intestine as Manifestation of Experimental Tuberculosis. (Solitäre Darmwandtuberkulose als besondere Form der experimentellen Meerschweinchentuberkulose.) G. Kiralyfi.
66 *Blood Picture with Latent Intestinal Tuberculosis. (Latente Tuberkulose des Darms und der mesenterialen Lymphdrüsen als Ursache eigenartiger hamätologischer Syndrome.) A. Bretschneider.
67 Sports and Gymnastics. (Deutsches Turnen und gymnastische Systeme.) R. du Bois-Reymond.

63. **Action of Iodin on the Human and Animal Organism.**—Strubell reports research showing the changes in the opsonic immunity under administration of iodin salts, especially the reduction of the resistance to staphylococci. He thinks that this throws light on the acne which is liable to develop when iodin is being taken; the skin loses its resisting power and casual staphylococci set up their lesions. His work confirms further the change in the viscosity of the blood under iodin, and it suggests that internal organs are likewise rendered more susceptible, particularly to toxins generated by staphylococci. A number of isolated facts learned by his research fit into the results of the research of others, the various cog-wheels, he says, forming a solid whole of great promise.

66. **Latent Intestinal Tuberculosis.**—Bretschneider refers in particular to hemolytic jaundice and pernicious anemia, reporting a case of each in which the blood picture was the main or only symptom of latent tuberculous processes in the intestine and mesenteric lymph-nodes.

Correspondenz-Blatt für Schweizer Aerzte, Basel

December 1, XLI, No. 34, pp. 1185-1216

68 Determination of Physical and Psychic Symptoms in the Subconsciousness. (Die Determination physischer und psychischer Symptome im Unterbewusstsein.) L. Frank.
69 Detachment of the Retina as Industrial Accident. (Gilt eine latente, durch Ueberanstrengung plötzlich manifest gewordene Netzhautablösung als Unfallfolge?) A. Dutoit.

Deutsche medizinische Wochenschrift, Berlin

December 7, XXXVII, No. 49, pp. 2265-2312

70 *Transplantation of Living Tissues. E. Enderlen.
71 *Toxicology of Tobacco. (Die Toxikologie des Tabakrauches und des Nikotins.) A. Fröhlich.
72 *Diagnosis of Gastric Cancer. (Ueber Frühdiagnose und Spätdiagnose des Magenkarzinoms.) I. Boas.
73 *Surgery of the Pancreas. (Zur Chirurgie der Pankreaserkrankungen.) E. G. Lick.
74 Epinephrin and Sugar in the Blood During Pregnancy. (Zur Frage der Adrenalinämie und des Blutzuckers in der Schwangerschaft.) E. Neubauer and J. Novak.
75 Serotherapy in Treatment of Pneumococcus Ulcer of the Cornea. (Behandlung der Pneumokokkeninfektion der Hornhaut — Ulcus serpens — mittels grosser Serummengen.) H. Gebb.
76 Technic for Intravenous Injection of Salvarsan. (Intravenöse Salvarsaninjektionen ohne Kochsalzzusatz.) M. Braun.
77 General Principles for Surgery of Peripheral Nerves. (Die Chirurgie der peripherischen Nerven.) Berger.
78 Inheritance of Acquired Properties. (Vererbung erworbener Eigenschaften.) H. Ribbert.
79 Advertising of New Drugs. (Unzutrügliche Reklame für neue Heilmittel.) L. Henius.

70. A recent summary of this subject was reviewed in THE JOURNAL, Dec. 23, 1911, p. 2113.

71. **Toxicology of Tobacco.**—Fröhlich discusses this subject from the standpoint of the pharmacologist and experimental analysis.

72. **Diagnosis of Gastric Cancer.**—Boas emphasizes that the early diagnosis of cancer means the detection of the first anatomic changes, and he thinks that when there are already clinical manifestations this stage is long past. The main point is to determine whether a cancer causing clinical manifestations has passed the stage of a local circumscribed process, that is, has become inoperable. There are several

points which throw light on this question; chief among them is the discovery of metastasis in the rectum or ovary. Boas reported long ago metastasis in the rectum in eight cases of gastric cancer and two of cancer in the liver, and has since observed several more cases of the kind. Before this, he found the metastasis in the rectum in a number of cases, including one of cancer of the cecum, although at the time he did not appreciate the secondary character of the growth. With Strauss, Kelling, Schnitzler, Bensaude and others he calls attention to the importance of metastasis in the rectum as an important sign that the primary cancer is already inoperable. He estimates the frequency of this sign at 20 or 30 per cent.; the metastasis is generally in the anterior wall of the rectum, from 2 to 4 cm. above the prostate, and feels hard and knobby, generally "like a seal ring," but occasionally a diffuse soft infiltration or tumor as large as a pigeon's egg, but always free from ulceration and not growing into the mucosa, and thus without the usual funnel shape of rectal cancer. In his cases the metastasis in the rectum never caused any symptoms. Only a few women patients were in this group with rectal metastasis. In one case recently of cancer of the pylorus he warned against attempting an operation, solely on account of the discovery of metastasis in the rectum, and the growth proved altogether inoperable. Another important point is that surgeons must refrain from operating on these rectal metastases on the assumption of a primary growth. Great attention should also be paid to metastasis in the ovaries, especially as the secondary growth generally overshadows the primary; it proclaims that the primary tumor is inoperable even when other conditions seem to favor its radical removal. Boas further emphasizes the importance of dulness in the semilunar space, the "rib phenomenon." He has always found this dulness when a cancer of the fundus of the stomach had involved large extents of the organ and thus offered great technical difficulties to its removal, but this sign requires further study to determine its connection with inoperability. Another important sign of inoperable extension of the cancer in stomach or intestine, is venous thrombosis in the leg, showing the passage of cancer cells into the blood. Possibly the cachexia reaction may prove useful to determine the operability of cancers, as well as other serologic and biologic tests. The practical importance of this "late diagnosis" is that surgeons will not be called on to operate in the absolutely hopeless cases, which will render the surgical statistics much more favorable, sifting out the cases doomed to failure and reducing the number of the unsatisfactory exploratory laparotomies.

73. **Surgery of the Pancreas.**—Liek reports two cases of acute hemorrhagic pancreatitis; in the first the anemia, ileus and abnormally slow pulse should have suggested the trouble, but several operations were necessary before the actual condition was recognized. The slow pulse was probably the result of irritation of the vagus. In the second case a cyst developed after acute pancreatitis, its location suggesting hydrops of the gall-bladder. The patient died nearly three years later of diabetes and pulmonary tuberculosis, and necropsy revealed fibrous degeneration of the head of the pancreas, all that remained of the organ. The pancreatitis had not been recognized at the time, but the cyst had evidently developed on the basis of a circumscribed necrosis.

Medizinische Klinik, Berlin

December 10, VII, No. 50, pp. 1921-1962

80 Inflammation. (Ueber die Entzündung.) F. Marchand.
81 The Tonsils in Pathology. (Die Tonsillen als Eintrittspforte der Infektionskrankheiten.) G. Finder.
82 Gastric Symptoms with and as Equivalent for Migraine. (Magensymptome und Magenäquivalente bei Migräne.) A. Schmidt.
83 Dyspnea from Distention of the Stomach with Air or Gases. (Ueber Magenspannung—Pneumatose—und Dyspnoe.) J. Pal.
84 *Early Diagnosis of Tuberculosis of the Kidney. (Zur Frühdiagnose der Nierentuberkulose.) C. Hirsch.
85 Treatment of Warts. (Warzenbehandlung.) E. Saalfeld.
86 Mountain Sunlight. (Das Licht im Gebirge.) A. Gockel.

84. **Early Diagnosis of Tuberculosis of the Kidney.**—Hirsch says that the urine may be little if any modified even with an established tuberculous process in the kidney, but that albuminuria of dubious origin should always compel examination of the urine for tubercle bacilli. This may reveal a tuberculous process in its incipiency, even when the albuminuria seems to be merely of the orthostatic, cyclic or lordotic type.

Monatsschrift für Kinderheilkunde, Leipsic

X, No. 8, pp. 391-438

87 *Physiology of Lactation. (Bedarf es des physiologischen Reizes zur Anregung und Erhaltung der Laktation?) H. Helbich.
88 Biologic Differentiation of Proteins in Milk. (Die biologische Differenzierung der Milcheiweisskörper.) H. Kleinschmidt.
87 Participation of Urogenital Mucosa in Exudative Diathesis. (Beteiligung der Schleimhaut des Urogenital- Apparates am Symptomenkomplex der exsudativen Diathese.) F. Leist.
90 Research on the Stomach in Tetany in Children. (Magenuntersuchungen bei kindlicher Tetanie.) O. Thorspecken.
91 The Ash Content of the Muscles with Rachitis. (Ueber den Aschgehalt der Muskulatur bei Rachitischen.) E. Aschenheim and L. Kaumheimer.

87. **Physiology of Lactation.**—Helbich states that he has been able to keep the breasts secreting normally when the infants were not nursing. By regularly drawing the milk with a breast pump, lactation proceeded as under normal conditions. He gives the curves in eight of the ten cases reported, all confirming the efficacy of this artificial drawing of the milk in keeping the breasts secreting normally for weeks and months. No untoward by-effects were observed in any instance. The amount of milk increased from 800 to 1,350 gm. between the first and eleventh months in one typical case after the death of the child in the second month.

Münchener medizinische Wochenschrift

December 5, LVIII, No. 49, pp. 2593-2648

92 Physiologic Differences Between the Cortex and the Medulla of the Thymus. (Bedeutung der eosinophil-gekörnten Blutzellen im menschlichen Thymus.) H. Schridde.
93 Degeneracy of Germ Cells Under Influence of Alcohol. (Alkohol und Keimzellen—Blastophthorische Entartung.) A. Forel.
94 Dead Bacteria in Water in Salvarsan Solution Enhances Toxicity. (Der Einfluss von Mikroben auf die Wirkung des Salvarsan.) W. L. and N. K. Yakimoff.
95 *Thrombosis of Mesenteric Vessels. (Ueber Verschluss der Mesenterialarterien und dessen Folgen.) H. Merkel.
96 Pneumonia Due to the Diplococcus. (Ein klinischer und experimenteller Beitrag zur Kenntnis der durch den Fränkelschen Bazillus verursachten Pneumonie.) E. Toenniessen.
97 Cocain Mydriasis. (Zur Kokainmydriasis.) W. Lindemann.
98 Electric Method of Determining Mineral Content of Water. (Eine einfache Bestimmung des Mineralstoffgehalts und der Härte von Trink- und Nutzwässern.) K. Wunder.
99 Test for Left-Handedness. (Einfaches Verfahren zur Ermittlung von Linkshändern.) A. Brüning.
100 Operative Treatment of Astigmatism. (Beitrag zu operativen Behandlungen des regelmässigen Astigmatismus.) G. Levinsohn.
101 Improved Technic for Intravenous Infusion. W. Rübsamen.
102 *Recurrence After Gall-Stone Operations. (Wie können wir Rezidive nach Gallensteinoperationen vermeiden und einschranken?) H. Kehr.
103 Plan for International Union for Advancement of Science. (Die Internationale Union zur Förderung der Wissenschaft.) K. Pollack.

95. **Mesenteric Thrombosis.**—Merkel tabulates the details of six cases from the literature of isolated occlusion of the inferior mesenteric artery with more or less serious anatomic changes in the region of the large intestine involved. He then reports a case of thrombosis of both mesenteric arteries, with necropsy. There was complete paralysis of the segment of the bowel involved, which was distended with a bloody mucous fluid. Death occurred from absorption of toxic substances at this point before the intestinal walls yielded. Sclerosis in the mesenteric vessels had evidently been the cause of the abdominal pains and constipation of which the patient had complained for a few months. Merkel can find only three cases on record similar to this. The trouble has been defined by Schnitzler as angiosclerotic dysperistalsis. Merkel remarks that there are over 150 cases on record of thrombosis of the superior mesenteric artery, fatal in nearly every instance. The anastomoses of the inferior mesenteric artery prevent serious damage from its obstruction as a rule, but when the artery is already affected with sclerosis and the heart is already more or less insufficient, the outcome is invariably fatal.

102. **Recurrences After Gall-Stone Operations.**—Kehr reports an additional instructive case of supposed recurrence of gallstones after an operation, supplementary to his article sum-

V. 191

marized in THE JOURNAL, Jan. 6, p. 70. He removed a stone from the common bile duct of a man of 60, whose liver showed signs of cirrhosis. His health persisted good for more than three years when he lost appetite and jaundice developed so intense that operative treatment was required. There were no pains. The liver again showed cirrhosis; the bile duct was moderately enlarged, containing purulent bile and an impacted stone, the size of a hazelnut. Kehr naturally assumed either a recurrence or imperfect clearing out of the concrements at the previous operation, but the microscope revealed a suture thread in the center of the stone which had evidently developed in the common bile duct, its structure differing entirely from that of gall-bladder stones. The case teaches the necessity for microscopic examination before asserting that there is recurrence of gall-stones.

Wiener klinische Wochenschrift, Vienna

December 7, XXIV, No. 49, pp. 1691-1726

104 Some Problems in Heredity. (Nachruf auf Ludwig Kerschner. —Einige Betrachtungen über das Vererbungsproblem.) H. Rabl.
105 Sunlight as a Therapeutic Factor. (Zu Sonnenkuren.) W. Winternitz.
106 Reaction in Urine Under Atophan. (Ueber einige im Atophanharne auftretende charakteristische Reaktionen.) W. Skorczewski and I. Sohn.
107 Formation of Vagina Out of Small Intestine. (Ueber die Herstellung einer künstlichen Vagina aus dem Dünndarm.) J. Halban.
108 Insurance of Wage-Earners in Hungary. (Die ungarische Arbeiterversicherung im Jahre 1910.) H. Pach.

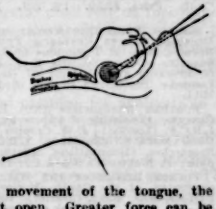
Zentralblatt für Chirurgie, Leipsic

December 16, XXXVIII, No. 50, pp. 1625-1656

109 *Treatment of Perforated Duodenal Ulcer. (Zur Behandlung des perforierten Duodenalgeschwürs.) A. Hofmann.
110 *Management of the Tongue During General Anesthesia. (Ein neuer Handgriff zur Narkose.) Gontermann.

109. Treatment of Perforated Duodenal Ulcer.—The tissues were so friable in the case reported by Hofmann that he found it impossible to suture the perforation. The duodenal ulcer had caused no symptoms until the perforation occurred in the night, and the operation followed twelve hours later. Bile and pancreatic juice had poured through the opening and there were already traces of fat necrosis. After the retrocolic posterior gastro-enterostomy had been made and the peritoneum cleaned out, the opening was plugged with a tampon and the liver pressed down on the ulcer and held in place by tampons introduced between the surface of the liver and the costal arch. The tampons were gradually removed later without any further trouble.

110. Management of the Tongue in General Anesthesia.—Gontermann avoids the disagreeable drawing out of the tongue and pulling the jaw forward, by a method of pushing the tongue out of the way with a round roller tampon, 3 or 4 cm. thick, introduced as the mouth is held open with a gag. The tampon is rolled along the surface of the tongue to its root, in front of the epiglottis. Applying pressure with the tampon on the tongue at its base and pressing toward the chin, the tongue is lifted forward and, as the epiglottis follows this movement of the tongue, the entrance to the larynx is left open. Greater force can be applied by leverage against the upper teeth. The gag is not required further when this tampon roll is once in place, and the fact that the tampon can be changed for a clean one at any time is a further advantage of the method. He has found it particularly useful and reliable during operations over an hour long, or when the head is held low.



Zentralblatt für Gynäkologie, Leipsic

December 16, XXXV, No. 50, pp. 1681-1704

111 *Sepsis from Bednar's Aphthæ in New-Born Infants. (Sepsis bei Neugeborenen ausgehend von der Bednar'schen Aphthen.) G. Linzenmeier.
112 *Ligation of Uterine Cervix to Arrest Hemorrhage. (Ueber eine der Methoden zur Stillung von Gebärmutterblutungen.) S. S. Cholmogoroff.

111. Sepsis from Aphthæ.—Linzenmeier reports three cases in which fatal sepsis developed from Bednar's aphthæ, an affection of infants only a week old, consisting in the mild forms of two yellow, flattened, slightly elevated patches, one on either side of the median raphe of the palate, possibly ulcerating and suggesting diphtheria and accompanied by profuse seropurulent nasal secretions. In his cases the phlegmonous affection spread downward into the intestinal tract and the infants soon died. In the first child the process ran a more gradual course, the esophagus and entire stomach becoming coated with the false membrane, but in the others the course was more like that of acute erysipelas. In each case hemolytic streptococci were cultivated from the tissues or secretions and diphtheria was bacteriologically excluded. The palate lesions were the first signs of trouble and he is inclined to ascribe them to mechanical injury from the wiping out of the mouth of the new-born infant, the injury affecting especially predisposed points in the palate. As the mothers all harbored hemolytic streptococci, infection of the lesions from them set up a serious syndrome; if the germs in the mouth had been only the ordinary flora, the affection would probably have run a mild course under the typical clinical picture of Bednar's aphthæ. The cases teach the importance of refraining from touching the interior of the new-born child's mouth. Linzenmeier clears out the infant's mouth by bending the body forward on its abdomen, holding the infant by the back of its neck and its feet. Aspirated mucus is thus forced out of the infant's mouth and nose, and it is wiped off at once by the child's knee. He calls this the "handkerchief maneuver" and states that its repetition for two or three times generally clears out effectually the mouth and nose. The nostrils are cleared with the tracheal catheter and any mucus left can usually be easily aspirated through the nostrils, as infants breathe only through the nose as a rule and the mucus lodges in the throat or nose. It is only exceptionally necessary to introduce the catheter into the trachea for the purpose.

112. Ligation of Cervix to Arrest Uterine Hemorrhage.—After curetting out the last traces of an abortion there was profuse arterial hemorrhage rebellious to the usual measures. There seemed no other recourse but to remove the uterus or to clamp the uterine arteries according to Henkel. As the latter procedure is not always effectual, and as the patient was too young to lose the uterus, Cholmogoroff decided to close the external os with a row of ligatures, hoping thus to dam the stream of blood as the uterus early in a pregnancy is hard and does not distend easily. The hemorrhage ceased after he had thrown seven ligatures around the cervix, passing the sutures through it. The uterus did not increase in size afterward and the ligatures were removed the ninth day.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 3, XXXII, No. 145, pp. 1531-1546

113 *Dangers and Inefficacy of Snake Venom in Treatment of Leprosy. (I veleni ofidici nella cura della lebbra.) E. Bertarelli.
114 Apparatus to Aid in Percussion of the Chest. (Nuovo apparecchio per lo studio della transmissione dei suoni attraverso il torace.) C. Molon.
115 *Direct Medication of Lungs and Pleura. (La terapia diretta nelle affezioni dell'apparato respiratorio.) V. d'Amico.

113. Dangers of Snake Venom in Treatment of Leprosy.—Bertarelli comments on the remarkable extent of the belief that the bite of a snake has a curative action in leprosy. It has been found for ages in the Orient, in South America, wherever leprosy is prevalent, but it has no scientific basis to date. He cites an experience reported by V. Brazil which occurred at Rio de Janeiro a few years ago. A certain man (named Machado) despairing of recovery from his leprosy and disregarding his physician's warning, deliberately exposed his hand to the bite of a rattlesnake. The toxic action of the venom induced intense congestion in the leprosy lesions, but otherwise the symptoms were those of ordinary rattlesnake bite, the man dying twenty-four hours afterward.

115. Direct Medication of the Lungs.—D'Amico reports twenty-two cases of pleurisy, pneumonia and pulmonary

tuberculosis or abscess in the lung, in which he injected a non-toxic disinfectant into or near the focus, testing the patient's tolerance by graduated doses. The principle followed was the same as in treatment for surgical tuberculosis elsewhere, and he says that the outcome was equally favorable. The disinfectant used was generally a mixture of 1 gm. iodoform; 2 gm. camphor; 5 gm. guaiacol; 30 drops of peppermint essence and 20 gm. olive oil. He injected 1 c.c. directly into the cavity, five times at three-day intervals, following with two injections into the apex in a case of tuberculous cavity and infiltration of the apex. By the end of two months the lesion had healed and after two more months the clinical cure was complete. In cases in which the aim was to transform a sluggish process to start a tendency to heal, he found Durante's iodo-iodid mixture preferable (1 part metallic iodin to 9 parts potassium iodid), but this proved too stimulating for pleurisy with effusion, aggravating the secretion. The injections never induced hemoptysis; he was careful to use a very narrow needle and have the patient rest at the time and afterward. The treatment was promptly successful in two cases of septic pneumonia, practically a phlegmon in the lung. He urges the adoption of direct medication as a routine measure.

Policlinico, Rome

December 3, XVIII, No. 49, pp. 1545-1576

116 Salvarsan in Syphilis of the Nervous System. (La cura del Salvarsan nella sifilide nervosa, e la reazione del Wassermann.) G. Mingazzini.

Riforma Medica, Naples

November 27, XXVII, No. 48, pp. 1317-1344

117 Arteriosclerosis in Relation to Syphilis. (L'arteriosclerosi nei suoi rapporti colla sifilide.) R. Campana.
118 Cancer of the Nipple. (Caso di emoangiosarcoma.) C. Licini.
119 Aleukemic Neoplastic Myelosarcomatosis. (Emosarcomatosi mielogena a tipo mieloblastico.) C. D. Martelli. Commenced in No. 47.

December 4, No. 49, pp. 1345-1372

120 *The Blood-Pressure in the Artery of the Retina. (La pressione del sangue nell'arteria retinica e suoi rapporti con la pressione nel circolo del Willis.) C. Rubino.

120. Determination of Blood-Pressure by Measuring it in the Artery of the Retina.—Rubino and Bajardi have each devised a simple means of determining the blood-pressure by the force necessary to arrest the circulation in the retina. The patient recognizes the ischemia at once by the inability to see with the eye in question. Rubino describes considerable experimental research on the anatomic conditions and the modifications of the blood-pressure when any of the arteries in the circle of Willis are compressed. The results all confirm the instructive findings when the sphygmometer is applied to the eye-ball with force sufficient to arrest the circulation in the retina; in 100 healthy adults the range was from 80 to 112 mm. mercury. He discusses in particular the relations between the blood-pressure in the artery of the retina and in the other arteries of the circle of Willis.

Hygiea, Stockholm

November, LXXIII, No. 11, pp. 1201-1307

121 *Disappearance of Malaria from Sweden. (Studier öfver frossan och de sannolikaste orsakerna till dess successiva aftagande och så godt som fullständiga upphörande i Sverige under sistförflutna halfsekel.) C. Flensburg.
122 *A Normal Following an Extra-Uterine Pregnancy. (Om hafvandeskap efter föregående extrauterin graviditet.) E. Essen-Möller.
123 *Operative Cases of Extra-Uterine Pregnancy. (Summarisk redogörelse för operativt behandlade fall af extrauterin-graviditet.) L. Lindquist.
124 Cyst in Third Ventricle. (Ett fall af ependymcysta i tredje hjärnventrikeln förorsakande hastig död.) H. Hanson-Breide.

121. Malaria in Sweden.—Flensburg relates that there are records showing 1,709 cases of chills and fever in Stockholm in 1827 and 2,582 cases in 1829, while when the figures for all of Sweden were recorded in 1871, there were 11,074 cases. Since that date the records show a constant drop; in 1890 there were only 1,288 cases throughout Sweden; in 1900, 289 and 45 in 1909. According to the months, the proportion of cases throughout Sweden, 1875 to 1908, with a total of 60,449 cases showed from 4 to 6 per cent. between August and February inclusive, the maximum being 13, 17 and 12 per cent. in April, May and June. He ascribes the practical disappearance of malaria from Sweden to general hygiene and drainage and cultivation of the soil, with possibly as an additional factor the cooler summers in the last century and a half. The weather bureau records show that the mean summer temperature is decidedly lower than it was fifty years ago.

122. A Normal Following an Extra-Uterine Pregnancy.—Essen-Möller reviews the experiences at Lund with fifty-six cases of extra-uterine pregnancy. Operative treatment was applied in all but one case and 46 per cent. of the thirty-nine patients traced to date have passed through another pregnancy since, five twice and two three times. Seventeen of these eighteen women bore normal children at term, which emphasizes the importance of leaving the adnexa on the other side intact. The best ultimate results were obtained when there had been no attempt to drain. He reviews further the experiences of others with conservative treatment, the testimony all being in favor of operative measures as leaving better conditions so that there is less danger of complications. In Brentano's compilation of ninety-one cases of non-operated extra-uterine pregnancy, there was spontaneous abortion later in twenty-two cases, proving fatal in eight. In the thirty-six following pregnancies in Essen-Möller's experience only two of the patients aborted.

123. Operative Treatment of Extra-Uterine Pregnancy.—Lindquist reports a following pregnancy in eleven of the forty cases of extra-uterine pregnancy at Göteborg since 1895. In two of these cases the following pregnancy was also tubal; in the others the pregnancy was quite normal. One patient succumbed to the hemorrhage from an unrecognized tubal abortion. She had not menstruated for two months and had complained of recurring pains in the left side but the temperature persisted normal. A resistance developed in this side, gradually spreading, and after two weeks a similar resistance developed in the right side. The anemia was so extreme that the patient succumbed five days after the operation.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

NEPHRITIS: AN EXPERIMENTAL AND CRITICAL STUDY OF ITS NATURE, CAUSE AND THE PRINCIPLES OF ITS RELIEF. By Martin H. Fischer. The 1911 Cartwright Prize Essay of the Association of the Alumni of the College of Physicians and Surgeons, Medical Department of Columbia University, New York. First Edition. Cloth. Price, $2.50. Pp. 201. New York: John Wiley & Sons, 1912.

FOURTH SCIENTIFIC REPORT ON THE INVESTIGATIONS OF THE IMPERIAL CANCER RESEARCH FUND. Under the direction of the Royal College of Physicians of London and the Royal College of Surgeons of England. By E. F. Bashford, General Superintendent of Research and Director of the Laboratory. Paper. Pp. 233. London: Taylor and Francis, Red Lion Court, Fleet Street, E. C., 1911.

FURTHER RESEARCHES INTO INDUCED CELL-REPRODUCTION AND CANCER. Consisting of Papers by H. C. Ross, M.R.C.S. (England), L.R.C.P. (London); J. W. Cropper, M.B., M.Sc., Liverpool, and E. H. Ross, M.R.C.S. (England), L.R.C.P. (London). The McFadden Researches. Illustrations. Cloth. Price, $1. Pp. 63. Philadelphia: P. Blakiston's Son & Co., 1911.

FOURTH REPORT OF THE WELLCOME TROPICAL RESEARCH LABORATORIES, at the Gordon Memorial College, Khartoum. Andrew Balfour, M.D., B.Sc., Director. Volume A.—Medical. Cloth. Price, $5. Pp. 404. New York: Toga Publishing Co., 35 West Thirty-Third Street, 1911.

THE KEY TO SEX CONTROL, or the Cellular Determination of Sex and the Physiologic Laws Which Govern Its Control. By Percy John McElrath, M.D. Cloth. Price, $3. Pp. 232. New York: Published by the Author, 1911.

HEREDITY IN RELATION TO EUGENICS. By Charles Benedict Davenport, Carnegie Institution of Washington, Director. Cloth. Price, $2. Pp. 298. New York: Henry Holt & Co., 1911.

FORTY-SECOND ANNUAL REPORT, STATE BOARD OF HEALTH OF MASSACHUSETTS. Cloth. Pp. 636.

REPORT OF BOARD OF HEALTH OF MISSISSIPPI, from 1909-1911. Cloth. Pp. 251.

REPORT OF PRESIDENT, BOARD OF HEALTH OF HAWAII. Paper. Pp. 221.

NINTH ANNUAL REPORT, VANCOUVER (B. C.) GENERAL HOSPITAL. 1910.

ANNUAIRE DE L'HOTEL-DIEU DE ST-JOSEPH. 1910. Montreal, P.Q.

V. 191